

Table 4

## Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
8268	18138		7.14	2.0E-61	11419729	NT	Homo sapiens ribosomal protein L44 (RPL44), mRNA
428	10373		0.85	1.0E-61	AL163203.2	NT	Homo sapiens chromosome 21 segment HS21C003
756	10686	20524	1.32	1.0E-61	5453829	NT	Homo sapiens origin recognition complex, subunit 2 (yeast homolog)-like (ORC2L), mRNA
1377	11283	21138	1.09	1.0E-61	AL163203.2	NT	Homo sapiens chromosome 21 segment HS21C003
1731	11632		0.97	1.0E-61	U32657.1	NT	Human polymorphic trinucleotide repeat in X-linked retinitis pigmentosa (RP3) gene region
1814	11711	21590	4.47	1.0E-61	6005983	NT	Homo sapiens zona pellucida glycoprotein 3A (sperm receptor) (ZP3A), mRNA
2150	12038	21935	1.49	1.0E-61	AW827281.1	EST_HUMAN	xn11b09.y1 NCL_CGAP_L16 Homo sapiens cDNA clone IMAGE:2693369 5' similar to contains element MSR1 repetitive element;
2804	12734	22533	1.67	1.0E-61	BE386363.1	EST_HUMAN	601273513F1 NIH_MGC_20 Homo sapiens cDNA clone IMAGE:3614867 5'
3330	13250	23055	0.88	1.0E-61	7662319	NT	Homo sapiens KIAA0806 gene product (KIAA0806), mRNA
3671	13585	23372	1.47	1.0E-61	BE174455.1	EST_HUMAN	QV2-H10577-140300-077-g06 HT0577 Homo sapiens cDNA
4339	14236	24019	0.95	1.0E-61	4759249	NT	Homo sapiens TRAF family member-associated NFKB activator (TANK) mRNA
4339	14236	24020	0.95	1.0E-61	4759249	NT	Homo sapiens TRAF family member-associated NFKB activator (TANK) mRNA
4751	14636	24422	7.63	1.0E-61	AW298181.1	EST_HUMAN	UI-H-BW0-aj1-b-08-0-UI.s1 NCL_CGAP_Sub8 Homo sapiens cDNA clone IMAGE:2732871 3'
4751	14636	24423	7.63	1.0E-61	AW298181.1	EST_HUMAN	UI-H-BW0-aj1-b-08-0-UI.s1 NCL_CGAP_Sub6 Homo sapiens cDNA clone IMAGE:2732871 3'
4878	14758	24535	0.85	1.0E-61	AL163210.2	NT	Homo sapiens chromosome 21 segment HS21C010
6124	15971	26107	7.19	1.0E-61	MB0135.1	NT	Human P40 T-cell and mast cell growth factor (hP40) gene, complete cds
6268	16133	26287	1.4	1.0E-61	8923130	NT	Homo sapiens hypothetical protein FLJ20128 (FLJ20128), mRNA
6268	16133	26288	1.4	1.0E-61	8923130	NT	Homo sapiens hypothetical protein FLJ20128 (FLJ20128), mRNA
6729	16609	26800	3.38	1.0E-61	11034840	NT	Homo sapiens growth hormone releasing hormone (GHRH), mRNA
6838	16717	26910	3.59	1.0E-61	AF224669.1	NT	Homo sapiens mannosidase, beta A, lysosomal (MANBA) gene, and ubiquitin-conjugating enzyme E2D 3 (UBE2D3) genes, complete cds
7348	17216		2.79	1.0E-61	AW99726.1	EST_HUMAN	MR0-BN0070-040400-010-h01 BN0070 Homo sapiens cDNA
7763	17613	27840	6.28	1.0E-61	11428892	NT	Homo sapiens KIAA0971 protein (KIAA0971), mRNA
8031	17923	28169	1.96	1.0E-61	11425578	NT	Homo sapiens actinin, alpha 4 (ACTN4), mRNA
9110	19631		1.26	1.0E-61	AB011399.1	NT	Homo sapiens gene for AF-6, complete cds
9149	19620	25002	2.96	1.0E-61	11430460	NT	Homo sapiens low density lipoprotein-related protein 2 (LRP2), mRNA
9149	19620	25003	2.96	1.0E-61	11430460	NT	Homo sapiens low density lipoprotein-related protein 2 (LRP2), mRNA
9515	19128	25261	1.8	1.0E-61	M20809.1	NT	Human kappa-immunoglobulin germline pseudogene (Chr1) variable region (subgroup V kappa I)
9805	19317	25205	8.25	1.0E-61	11418127	NT	Homo sapiens GTP binding protein 1 (GTPBP1), mRNA
4451	14345	24138	0.79	8.0E-62	AA830420.1	EST_HUMAN	cc66h11.s1 NCL_CGAP_GCB1 Homo sapiens cDNA clone IMAGE:1354725 3' similar to SW:POL_MLVRK
9953	19417		1.56	8.0E-62	AA768861.1	EST_HUMAN	P31795 POL POLYPYPROTEIN ;
1091	11007	20848	1.27	7.0E-62	AV714334.1	EST_HUMAN	mz75g01.s1 NCL_CGAP_GCB1 Homo sapiens cDNA clone IMAGE:1301328 3'

Page 251 of 413  
Table 4  
Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
3462	13378	23184	0.79	7.0E-62	P17480	SWISSPROT	NUCLEOLAR TRANSCRIPTION FACTOR 1 (UPSTREAM BINDING FACTOR 1) (UBF-1) (AUTOANTIGEN NOR-90)
8657	18546	28829	4	7.0E-62	AJ208681.1	EST_HUMAN	qg56a04.x1 Soares_testis_NHT Homo sapiens cDNA clone IMAGE:1839150 3' similar to TR:O15103
2969	12896		1.07	6.0E-62	U09410.1	NT	O15103 HYPOTHETICAL 27.3 KD PROTEIN.;
3338	13258		3.93	6.0E-62	11418255	NT	Human zinc finger protein ZNF131 mRNA, partial cds
6496	16355	26525	3.33	6.0E-62	AJ762801.1	EST_HUMAN	Homo sapiens CGI-56 protein (CGI-56), mRNA
6496	16355	26526	3.33	6.0E-62	AJ762801.1	EST_HUMAN	wi04402.x1 NCJ CGAP CLL1 Homo sapiens cDNA clone IMAGE:2389251 3'
6804	16883	26873	1.4	6.0E-62	11431139	NT	wi04402.x1 NCJ CGAP CLL1 Homo sapiens cDNA clone IMAGE:2389251 3'
7386	17255	27460	2.76	6.0E-62	AW814393.1	EST_HUMAN	Homo sapiens CGI-18 protein (LOC51008), mRNA
410	10356	20183	1.49	5.0E-62	AJ950528.1	EST_HUMAN	MR3-ST0203-130100-025-a09 S10203 Homo sapiens cDNA
2356	12236	22132	3.26	5.0E-62	AJ271735.1	NT	wx51e07.x1 NCJ CGAP Lu28 Homo sapiens cDNA clone IMAGE:2547204 3' similar to SW:GG95_HUMAN
2356	12236	22133	3.26	5.0E-62	AJ271735.1	NT	Q08379 GOLGIN-95; contains element MER22 repetitive element;
3372	13291	23090	2.17	5.0E-62	4506758	NT	Homo sapiens Xq pseudautosomal region; segment 1/2
4233	14131	23907	1.65	5.0E-62	AA431093.1	EST_HUMAN	Homo sapiens Xq pseudautosomal region; segment 1/2
7482	17352	27556	6.17	5.0E-62	AW410687.1	EST_HUMAN	Homo sapiens Xq pseudautosomal region; segment 1/2
8587	18455	28723	4.91	5.0E-62	11425574	NT	Homo sapiens ryanodine receptor 3 (RYR3) mRNA
8587	18455	28724	4.91	5.0E-62	11425574	NT	zw78e09.s1 Soares_testis_NHT Homo sapiens cDNA clone IMAGE:782344 3' similar to SW:NRDC_RAT
822	10750	20597	3.47	4.0E-62	AW161479.1	EST_HUMAN	P47245 NARDILYSIN;
822	10750	20598	3.47	4.0E-62	AW161479.1	EST_HUMAN	fn07g09.x1 NIH_MGC_17 Homo sapiens cDNA clone IMAGE:2961616 5'
823	10750	20597	4.63	4.0E-62	AW161479.1	EST_HUMAN	Homo sapiens muscle specific gene (M9), mRNA
823	10750	20598	4.63	4.0E-62	AW161479.1	EST_HUMAN	Homo sapiens muscle specific gene (M9), mRNA
1446	11351		0.89	4.0E-62	AA311281.1	EST_HUMAN	au71d03.y1 Schneider fetal brain 00004 Homo sapiens cDNA clone IMAGE:2781701 5' similar to gb:M37104
2409	12286	22183	1.39	4.0E-62	AJ827900.1	EST_HUMAN	ATP SYNTHASE COUPLING FACTOR 6, MITOCHONDRIAL PRECURSOR (HUMAN);
2409	12286	22184	1.39	4.0E-62	AJ827900.1	EST_HUMAN	ATP SYNTHASE COUPLING FACTOR 6, MITOCHONDRIAL PRECURSOR (HUMAN);
3353	13273		6.6	4.0E-62	4557887	NT	EST182043 Jurkat T-cells V Homo sapiens cDNA 5' end
							wf12b08.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2350359 3' similar to gb:X57138_mna1 HISTONE H2B.2 (HUMAN);
							gb:X57138_mna1 HISTONE H2B.2 (HUMAN);
							wf12b08.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2350359 3' similar to gb:X57138_mna1 HISTONE H2B.2 (HUMAN);
							gb:X57138_mna1 HISTONE H2B.2 (HUMAN);
							Homo sapiens keratin 18 (KRT18) mRNA

Page 252 of 413  
Table 4

## Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
4947	14824		2.03	4.0E-62	AJ243213.1	NT	Homo sapiens partial 5-HT4 receptor gene, exons 2 to 5
5609	15524	25606	1.66	4.0E-62	4506978	NT	Homo sapiens solute carrier family 13 (sodium-dependent dicarboxylate transporter), member 2 (SLC13A2) mRNA
5804	15709	25822	2.42	4.0E-62	11420654	NT	Homo sapiens ubiquitin specific protease 9, X chromosome (Drosophila fat facets related) (USP9X), mRNA
6254	16120	26273	1.68	4.0E-62	11421041	NT	Homo sapiens phosphoribosyl pyrophosphate synthetase 2 (PRPS2), mRNA
6498	16357	26528	2.21	4.0E-62	7657057	NT	Homo sapiens eukaryotic translation initiation factor 2B, subunit 2 (beta, 39kD) (EIF2B2), mRNA
6498	16357	26529	2.21	4.0E-62	7657057	NT	Homo sapiens eukaryotic translation initiation factor 2B, subunit 2 (beta, 39kD) (EIF2B2), mRNA
7134	17011	27204	6.3	4.0E-62	AB033089.1	NT	Homo sapiens mRNA for KIAA1263 protein, partial cds
8377	18254	28505	2.43	4.0E-62	Z78766.1	NT	H. sapiens flow-sorted chromosome 6 HindIII fragment, SC6pA16D3
8377	18254	28506	2.43	4.0E-62	Z78766.1	NT	H. sapiens flow-sorted chromosome 6 HindIII fragment, SC6pA16D3
9135	18891	28792	2.95	4.0E-62	11418086	NT	Homo sapiens putative nuclear protein (HRIHFB2122), mRNA
9355	19378		2.98	4.0E-62	11418192	NT	Homo sapiens non-histone chromosome protein 2 (S. cerevisiae)-like 1 (NHPL1), mRNA
9743	19305	25201	1.99	4.0E-62	11418322	NT	Homo sapiens cadherin EGF LAG seven-pass G-type receptor 1 (CELSR1), mRNA
9792	19302	25198	4.2	4.0E-62	11417862	NT	Homo sapiens calcineurin binding protein 1 (KIAA0330), mRNA
9792	19302	25199	4.2	4.0E-62	11417862	NT	Homo sapiens calcineurin binding protein 1 (KIAA0330), mRNA
9835	19335	25210	1.51	4.0E-62	11430460	NT	Homo sapiens low density lipoprotein-related protein 2 (LRP2), mRNA
68	10053	19868	1.12	3.0E-62	4557794	NT	Homo sapiens neurofibromin 2 (bilateral acoustic neuroma) (NF2) mRNA
3008	12936	22728	0.95	3.0E-62	AB040909.1	NT	Homo sapiens mRNA for KIAA1476 protein, partial cds
3008	12936	22729	0.95	3.0E-62	AB040909.1	NT	Homo sapiens mRNA for KIAA1476 protein, partial cds
3640	13554	23340	1.92	3.0E-62	X52858.1	NT	Human cyclophilin-related processed pseudogene
6969	16846	27098	4.35	3.0E-62	AI632733.1	EST_HUMAN	wa33f04.x1 NCL CGAP_Kid11 Homo sapiens cDNA clone IMAGE:2299903 3' similar to contains THR42 THR repetitive element ;
1211	11120	20989	1.5	2.0E-62	AL163284.2	NT	Homo sapiens chromosome 21 segment HS21C084
7096	16973	27165	4.8	2.0E-62	BF329911.1	EST_HUMAN	RC0-BN0284-300500-031-e05 BN0284 Homo sapiens cDNA
7096	16973	27166	4.8	2.0E-62	BF329911.1	EST_HUMAN	RC0-BN0284-300500-031-e05 BN0284 Homo sapiens cDNA
7846	17696		3.94	2.0E-62	AF224669.1	NT	Homo sapiens mannosidase, beta A, lysosomal (MANBA) gene, and ubiquitin-conjugating enzyme E2D 3 (UBE2D3) genes, complete cds
8836	18744		8.93	2.0E-62	BF330676.1	EST_HUMAN	QV4-BT0257-081199-017-e03 BT0257 Homo sapiens cDNA
1028	10946	20791	1.24	1.0E-62	AF248540.1	NT	Homo sapiens intersecin 2 (SH3D1B) mRNA, complete cds
1526	11431	21288	6.83	1.0E-62	L78810.1	NT	Homo sapiens ADP/ATP carrier protein (ANT-2) gene, complete cds
1758	11657	21528	1.02	1.0E-62	AA625207.1	EST_HUMAN	af70e11.1 Scores_NhiMPu_S1 Homo sapiens cDNA clone IMAGE:1047404 5' similar to WP:K01H12.1 CE03453 ;
2884	12811	22606	1.12	1.0E-62	AL039044.1	EST_HUMAN	DKF7p566F104_r1 566 (synonym: hfkd2) Homo sapiens cDNA clone DKF7p566F104 5'

Page 253 of 413  
Table 4  
Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
4426	14321	24108	1.32	1.0E-62	8923201	NT	Homo sapiens hypothetical protein FLJ20212 (FLJ20212), mRNA
6236	16102	26251	2.17	1.0E-62	AA722878.1	EST_HUMAN	zg99f10.s1 Soares_fetal_heart_NHHH19W Homo sapiens cDNA clone IMAGE:409771 3'
6236	16102	26252	2.17	1.0E-62	AA722878.1	EST_HUMAN	zg99f10.s1 Soares_fetal_heart_NHHH19W Homo sapiens cDNA clone IMAGE:409771 3'
7239	17116	27310	1.53	1.0E-62	7662289	NT	Homo sapiens KIAA0763 gene product (KIAA0763), mRNA
7239	17116	27311	1.53	1.0E-62	7662289	NT	Homo sapiens KIAA0763 gene product (KIAA0763), mRNA
7262	17139	27331	1.81	1.0E-62	X15533.1	NT	H. sapiens lysosomal acid phosphatase gene (EC 3.1.3.2) Exon 9
7262	17139	27332	1.81	1.0E-62	X15533.1	NT	H. sapiens lysosomal acid phosphatase gene (EC 3.1.3.2) Exon 9
7512	17300	27507	2.81	1.0E-62	AA465170.1	EST_HUMAN	aa33d08.s1 NCI_CGAP_GCB1 Homo sapiens cDNA clone IMAGE:815055 3'
8673	18561	28845	2.13	1.0E-62	Z78698.1	NT	H. sapiens flow-sorted chromosome 6 HindIII fragment SC6pA14D8
9023	19199		1.94	1.0E-62	11418322	NT	Homo sapiens cadherin EGF LAG seven-pass G-type receptor 1 (CELSR1), mRNA
9815	19322	25206	2.3	1.0E-62	11430480	NT	Homo sapiens low density lipoprotein-related protein 2 (LRP2), mRNA
335	10294	20109	2.14	9.0E-63	AW816405.1	EST_HUMAN	QV4-ST0234-181199-037-405 ST0234 Homo sapiens cDNA
2297	12179		1.51	9.0E-63	C18159.1	EST_HUMAN	C18159 Human placenta cDNA (TFujiiwara) Homo sapiens cDNA clone GEN-559C10 5'
3955	13863	23638	7.42	9.0E-63	AB002348.2	NT	Homo sapiens mRNA for KIAA0350 protein, partial cds
3955	13863	23639	7.42	9.0E-63	AB002348.2	NT	Homo sapiens mRNA for KIAA0350 protein, partial cds
5210	15088	29106	6.51	9.0E-63	11418185	NT	Homo sapiens acinase 2, mitochondrial (ACO2), mRNA
5354	15274	25104	1.31	9.0E-63	Y15056.1	NT	Homo sapiens mRNA for Pkb kinase
6262	16127	26281	4.39	9.0E-63	11426985	NT	Homo sapiens nucleoporin 88KD (NUP88), mRNA
6845	16724	26917	1.37	9.0E-63	11421160	NT	Homo sapiens Ras association (Ra)GDS/AF-6 domain family 2 (RASSF2), mRNA
2296	12178	22077	1.52	8.0E-63	4557734	NT	Homo sapiens monoamine oxidase A (MAOA), nuclear gene encoding mitochondrial protein, mRNA
2322	12203	22102	2.17	8.0E-63	5031810	NT	Homo sapiens IL2-inducible T-cell kinase (ITK), mRNA
3415	13332	23134	3.81	8.0E-63	AF198349.1	NT	Gallus gallus Dach2 protein (Dach2) mRNA, complete cds
3415	13332	23135	3.81	8.0E-63	AF198349.1	NT	Gallus gallus Dach2 protein (Dach2) mRNA, complete cds
4168	14068	23843	3.37	8.0E-63	AL163268.2	NT	Homo sapiens chromosome 21 segment HS21C068
913	10837		1.78	7.0E-63	A1872137.1	EST_HUMAN	wm55g11.x1 NCI_CGAP_U12 Homo sapiens cDNA clone IMAGE:2439908 3'
5274	15196		40.61	6.0E-63	AA420803.1	EST_HUMAN	nc63f02.r1 NCI_CGAP_P1 Homo sapiens cDNA clone IMAGE:745947 similar to gb:Y003061 60S RIBOSOMAL PROTEIN (HUMAN);
3279	13200	23001	0.98	4.0E-63	AL163278.2	NT	Homo sapiens chromosome 21 segment HS21C078
5879	15785	25905	2.86	4.0E-63	AW750372.1	EST_HUMAN	CM3-BT0595-190100-072-a09 BT0595 Homo sapiens cDNA
5879	15785	25906	2.86	4.0E-63	AW750372.1	EST_HUMAN	CM3-BT0595-190100-072-a09 BT0595 Homo sapiens cDNA
8474	18347	28611	2	4.0E-63	AW134709.1	EST_HUMAN	UI-H-B11-abq-a-02-0-UI.s1 NCI_CGAP_Sub3 Homo sapiens cDNA clone IMAGE:2712482 3'
8474	18347	28612	2	4.0E-63	AW134709.1	EST_HUMAN	UI-H-B11-abq-a-02-0-UI.s1 NCI_CGAP_Sub3 Homo sapiens cDNA clone IMAGE:2712482 3'
1893	11788	21686	1.97	3.0E-63	AB018280.1	NT	Homo sapiens mRNA for KIAA0717 protein, partial cds

Table 4

## Single Exon Probes Expressed in Heart

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
2753	12615	22506	1.34	3.0E-63	J00310.1	NT	Human Met-tRNA-i gene 1
2791	11127	20978	8.97	3.0E-63	6005963	NT	Homo sapiens zinc finger protein 144 (ZNF144), mRNA
5886	15802	25926	27.69	3.0E-63	11545810	NT	Homo sapiens hepatocellular carcinoma antigen gene 520 (LOC63928), mRNA
7597	17448	27663	1.82	3.0E-63	BE876158.1	EST_HUMAN	601485656F1 NIH_MGC 69 Homo sapiens cDNA clone IMAGE:3888253 5'
7597	17448	27664	1.82	3.0E-63	BE876158.1	EST_HUMAN	601485656F1 NIH_MGC 69 Homo sapiens cDNA clone IMAGE:3888253 5'
184	10156	19972	1.11	2.0E-63	U07804.1	NT	Human DNA topoisomerase I mRNA, partial cds
191	10163	19980	1.74	2.0E-63	4885226	NT	Homo sapiens eyes absent (Drosophila) homolog 2 (EYA2), mRNA
489	10432		1.39	2.0E-63	4557624	NT	Homo sapiens glutamate-cysteine ligase (gamma-glutamylcysteine synthetase), catalytic (72.8kD) (GLCLC) mRNA
809	10738	20583	5.29	2.0E-63	7657042	NT	Homo sapiens Down syndrome candidate region 1 (DSCR1), mRNA
1547	11452	21312	2.47	2.0E-63	AB030388.1	NT	Homo sapiens RHCE mRNA for Rh blood CE group antigen polypeptide, complete cds
1547	11452	21313	2.47	2.0E-63	AB030388.1	NT	Homo sapiens RHCE mRNA for Rh blood CE group antigen polypeptide, complete cds
3119	13044	22841	1.68	2.0E-63	4502166	NT	Homo sapiens amyloid beta (A4) precursor protein (protease nexin-II, Alzheimer disease) (APP), mRNA
3248	13171	22970	1.78	2.0E-63	AF109718.1	NT	Homo sapiens chromosome 3 subtelomeric region
3831	13743	23535	1.86	2.0E-63	L39891.1	NT	Homo sapiens polycystic kidney disease-associated protein (PKD1) gene, complete cds
4760	14645	24434	1.13	2.0E-63	AF111167.2	NT	Homo sapiens Jun dimerization protein gene, partial cds; cfos gene, complete cds; and unknown gene
5587	15502	25578	2.45	2.0E-63	BF373541.1	EST_HUMAN	QV1-FT0170-040700-265-c05 FT0170 Homo sapiens cDNA
5587	15502	25579	2.45	2.0E-63	BF373541.1	EST_HUMAN	QV1-FT0170-040700-265-c05 FT0170 Homo sapiens cDNA
							Human germline T-cell receptor beta chain Dopamine-beta-hydroxylase-like, TRY1, TRY2, TRY3, TCRBV27S1P, TCRBV22S1A2N1T, TCRBV9S1A1T, TCRBV7S1A1N2T, TCRBV5S1A1T, TCRBV13S3, TCRBV6S7P, TCRBV7S3A2T, TCRBV13S2A1T, TCRBV9S2A2PT, TCRBV7S2A1N4T, TCRBV13S9/13S>
6025	15929	26061	1.37	2.0E-63	U66059.1	NT	Homo sapiens Carbonic anhydrase-related protein 10 (LOC55934), mRNA
6208	15968	26103	1.41	2.0E-63	9910365	NT	Homo sapiens Carbonic anhydrase-related protein 10 (LOC55934), mRNA
6208	15968	26104	1.41	2.0E-63	9910365	NT	Homo sapiens Carbonic anhydrase-related protein 10 (LOC55934), mRNA
6964	16842	27034	3.8	2.0E-63	AL163210.2	NT	Homo sapiens chromosome 21 segment HS21C010
							zb18k05.s1 Soares fetal lung NbHL19W Homo sapiens cDNA clone IMAGE:302385 3' similar to gb:U17206 40S RIBOSOMAL PROTEIN S4 (HUMAN);
8129	18017	28265	12.54	2.0E-63	N78945.1	EST_HUMAN	Homo sapiens neurexin III-alpha gene, partial cds
8154	18042	28292	3.02	2.0E-63	AF099810.1	NT	Homo sapiens neurexin III-alpha gene, partial cds
8154	18042	28293	3.02	2.0E-63	AF099810.1	NT	Homo sapiens neurexin III-alpha gene, partial cds
9243	19523	25058	10.85	2.0E-63	11418185	NT	Homo sapiens aconitase 2, mitochondrial (ACO2), mRNA
9864	19354	25186	1.39	2.0E-63	11418157	NT	Homo sapiens calcium channel, voltage-dependent, alpha 1I subunit (CACNA1I), mRNA
4246	14145	23918	2.91	1.0E-63	F08485.1	EST_HUMAN	HSC2VD111 normalized infant brain cDNA Homo sapiens cDNA clone c-zvd11

Table 4

## Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
4246	14145	23919	2.91	1.0E-63	F08485.1	EST_HUMAN	HSCZVD111 normalized infant brain cDNA Homo sapiens cDNA clone c-zvd11
5526	15443	25509	1.39	1.0E-63	AW582266.1	EST_HUMAN	QV0-ST0215-060100-083-009 ST0215 Homo sapiens cDNA
6935	16813		2.3	1.0E-63	AL163247.2	NT	Homo sapiens chromosome 21 segment HS21C047
9879	19633		3.02	1.0E-63	AL163207.2	NT	Homo sapiens chromosome 21 segment HS21C007
6591	16471	26661	4.78	9.0E-64	AI478186.1	EST_HUMAN	tm50b07.x1 NCI_CGAP_Kid11 Homo sapiens cDNA clone IMAGE:2161525 3'
1030	10948		7.89	8.0E-64	BE280796.1	EST_HUMAN	601155232F1 NIH_MGC_21 Homo sapiens cDNA clone IMAGE:3139038 5'
5733	15641	25747	3.16	8.0E-64	BE885755.1	EST_HUMAN	601508968F1 NIH_MGC_71 Homo sapiens cDNA clone IMAGE:3910336 5'
9059	18841		2.61	8.0E-64	11418177	NT	Homo sapiens Ran GTPase activating protein 1 (RANGAP1), mRNA
9111	18875		2.56	8.0E-64	T00651.1	EST_HUMAN	y09b02.11 Stralagene lung (#937210) Homo sapiens cDNA clone IMAGE:79179 5'
3486	13402		0.99	7.0E-64	BE39421.1	EST_HUMAN	601311455F1 NIH_MGC_44 Homo sapiens cDNA clone IMAGE:3633204 5'
4625	14513	24303	2.44	7.0E-64	4507490	NT	Homo sapiens thimet oligopeptidase 1 (THOP1) mRNA
4625	14513	24304	2.44	7.0E-64	4507490	NT	Homo sapiens thimet oligopeptidase 1 (THOP1) mRNA
7766	17616	27844	2.13	7.0E-64	Y07848.1	NT	Homo sapiens EWS, gar22, rrp22 and bam22 genes
1692	11594	21463	1.7	6.0E-64	A1651992.1	EST_HUMAN	wb51e07.x1 NCI_CGAP_GC6 Homo sapiens cDNA clone IMAGE:2309220 3' similar to gb:M15182 BETA-GLUCURONIDASE PRECURSOR (HUMAN);
1692	11594	21464	1.7	6.0E-64	A1651992.1	EST_HUMAN	wb51e07.x1 NCI_CGAP_GC6 Homo sapiens cDNA clone IMAGE:2309220 3' similar to gb:M15182 BETA-GLUCURONIDASE PRECURSOR (HUMAN);
3084	13011	22801	3.7	6.0E-64	AW026445.1	EST_HUMAN	wv13e03.x1 NCI_CGAP_Bm23 Homo sapiens cDNA clone IMAGE:2529436 3'
3084	13011	22802	3.7	6.0E-64	AW026445.1	EST_HUMAN	wv13e03.x1 NCI_CGAP_Bm23 Homo sapiens cDNA clone IMAGE:2529436 3'
5454	15375	25433	2.64	6.0E-64	Y18933.1	NT	Homo sapiens MCP-1 gene and enhancer region
5454	15375	25434	2.64	6.0E-64	Y18933.1	NT	Homo sapiens MCP-1 gene and enhancer region
5464	15384	25444	4.41	6.0E-64	M13975.1	NT	Homo sapiens protein kinase C beta-II type (PRKCB1) mRNA, complete cds
6293	16157	26312	2.58	6.0E-64	11528879	NT	Homo sapiens mesenchyme homeo box 1 (MEOX1), mRNA
6293	16157	26313	2.58	6.0E-64	11528879	NT	Homo sapiens mesenchyme homeo box 1 (MEOX1), mRNA
7376	17245	27451	7.8	6.0E-64	11420555	NT	Homo sapiens acetyl-CoA synthetase (LOC55902), mRNA
7472	17332	27538	2.06	6.0E-64	AF274753.1	NT	Homo sapiens progressive ankylosis-like protein (ANK) mRNA, complete cds
7604	17455	27669	2.34	6.0E-64	S76475.1	NT	trkC [human, brain, mRNA, 2715 nt]
8151	18039	28287	7.57	6.0E-64	11420197	NT	Homo sapiens stromal antigen 3 (STAG3), mRNA
8151	18039	28288	7.57	6.0E-64	11420197	NT	Homo sapiens stromal antigen 3 (STAG3), mRNA
9262	18967	25321	4.06	6.0E-64	11526198	NT	Homo sapiens interleukin 10 receptor, beta (IL10RB), mRNA
803	10732	20574	2.44	5.0E-64	AF231919.1	NT	Homo sapiens chromosome 21 unknown mRNA
803	10732	20575	2.44	5.0E-64	AF231919.1	NT	Homo sapiens chromosome 21 unknown mRNA
1402	11307	21167	2.42	5.0E-64	L40933.1	NT	Homo sapiens phosphoglucomutase-related protein (PGMRP) gene, complete cds
1402	11307	21168	2.42	5.0E-64	L40933.1	NT	Homo sapiens phosphoglucomutase-related protein (PGMRP) gene, complete cds

Table 4

## Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
1683	11585	21457	1.67	5.0E-64	U89358.1	NT	Human I(3)mbt protein homolog mRNA, complete cds
2796	11370	21235	2.66	5.0E-64	7662205	NT	Homo sapiens KIAA0618 gene product (KIAA0618), mRNA
2796	11370	21236	2.66	5.0E-64	7662205	NT	Homo sapiens KIAA0618 gene product (KIAA0618), mRNA
3876	13787	23575	5.61	5.0E-64	AF017433.1	NT	Homo sapiens putative transcription factor CR53 (CR53) mRNA, partial cds
8188	18074	28324	3.9	4.0E-64	AW813783.1	EST_HUMAN	RC3-ST0197-120200-015-a03 ST0197 Homo sapiens cDNA
8188	18074	28325	3.9	4.0E-64	AW813783.1	EST_HUMAN	RC3-ST0197-120200-015-a03 ST0197 Homo sapiens cDNA
2151	12039	21936	3.85	3.0E-64	C18895.1	EST_HUMAN	C18895 Human placenta cDNA (Tfujwara) Homo sapiens cDNA clone GEN-569E02 5'
3216	13140	22943	0.95	3.0E-64	BE794381.1	EST_HUMAN	601589555F1 NIH_MGC_7 Homo sapiens cDNA clone IMAGE:3943577 5'
3396	13313	23112	1.51	3.0E-64	AV711714.1	EST_HUMAN	AV711714 DCA Homo sapiens cDNA clone DCAAMC01 5'
3396	13313	23113	1.51	3.0E-64	AV711714.1	EST_HUMAN	AV711714 DCA Homo sapiens cDNA clone DCAAMC01 5'
5703	15611	25713	1.34	3.0E-64	Z26273.1	NT	H. sapiens isoform 1 gene for L-type calcium channel, exon 28
5911	15817	25942	3.39	3.0E-64	BF370000.1	EST_HUMAN	RC6-FN0019-230600-011-G11 FN0019 Homo sapiens cDNA
6933	16811	27005	1.81	3.0E-64	AF248953.1	NT	Homo sapiens golgi matrix protein GM130 (GOLGA2) mRNA, complete cds
6933	16811	27006	1.81	3.0E-64	AF248953.1	NT	Homo sapiens golgi matrix protein GM130 (GOLGA2) mRNA, complete cds
6946	16824	27016	1.3	3.0E-64	BE206521.1	EST_HUMAN	bb72h12.y1 NIH_MGC_12 Homo sapiens cDNA clone IMAGE:3047975 5' similar to gb:L08069 DNAJ
6946	16824	27017	1.3	3.0E-64	BE206521.1	EST_HUMAN	PROTEIN HOMOLOG 2 (HUMAN);
7422	17289	27497	1.26	3.0E-64	AL163246.2	NT	bb72h12.y1 NIH_MGC_12 Homo sapiens cDNA clone IMAGE:3047975 5' similar to gb:L08069 DNAJ
7422	17289	27498	1.26	3.0E-64	AL163246.2	NT	PROTEIN HOMOLOG 2 (HUMAN);
8565	18434	28703	1.76	3.0E-64	AL163246.2	NT	Homo sapiens chromosome 21 segment HS21C046
8565	18434	28704	1.76	3.0E-64	AL163246.2	NT	Homo sapiens chromosome 21 segment HS21C046
8938	18746	29040	4.59	3.0E-64	AL163227.2	NT	Homo sapiens chromosome 21 segment HS21C046
1072	10988	20831	0.94	2.0E-64	AA609940.1	EST_HUMAN	Homo sapiens chromosome 21 segment HS21C027
1376	11282	21137	1.32	2.0E-64	4757701	NT	af09408.s1 Soares, testis_NHT Homo sapiens cDNA clone IMAGE:1031151 3'
2478	12354		1.78	2.0E-64	A1927030.1	EST_HUMAN	Homo sapiens eIF4E-like cap-binding protein (4EHP) mRNA
2484	12359	22252	3.03	2.0E-64	AL163246.2	NT	wc87b01.x1 NCL_CGAP_Kid11 Homo sapiens cDNA clone IMAGE:2462281 3' similar to contains element L1 repetitive element;
2484	12359	22253	3.03	2.0E-64	AL163246.2	NT	Homo sapiens chromosome 21 segment HS21C046
3101	13027	22823	2.56	2.0E-64	4504068	NT	Homo sapiens chromosome 21 segment HS21C046
3719	13631	23416	1.33	2.0E-64	AW958145.1	EST_HUMAN	Homo sapiens glutamic-oxaloacetic transaminase 2, mitochondrial (aspartate aminotransferase 2) (GOT2), nuclear gene encoding mitochondrial protein, mRNA
3719	13631	23417	1.33	2.0E-64	AW958145.1	EST_HUMAN	EST370215 IMAGE resequences, IMAGE Homo sapiens cDNA
5653	15565	25662	2.62	2.0E-64	AU124387.1	EST_HUMAN	EST370215 IMAGE resequences, IMAGE Homo sapiens cDNA
							AU124387 NT2RM2 Homo sapiens cDNA clone NT2RM2002113 5'



Page 257 of 413  
Table 4  
Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
5783	15689	25799	1.3	2.0E-64	AF113708.1	NT	Homo sapiens angiotensin 4 (ANG4) mRNA, partial cds
5906	15812	25938	4.97	2.0E-64	BF68537.1	EST_HUMAN	602123474F1 NIH_MGC_56 Homo sapiens cDNA clone IMAGE:4280395 5'
5976	15880	26004	1.31	2.0E-64	AI078387.1	EST_HUMAN	oz29b03.x1 Soares_total_fetus_Nb2HF8_9w Homo sapiens cDNA clone IMAGE:1676717 3'
6024	15928	26060	3.96	2.0E-64	M77185.1	NT	H.sapiens dopamine receptor D5 pseudogene 1, partial cds
8144	18032	28279	2.85	2.0E-64	BF528114.1	EST_HUMAN	602042882F1 NCL_CGAP_Brn67 Homo sapiens cDNA clone IMAGE:4180556 5'
8406	18282	28534	6.4	2.0E-64	AI922911.1	EST_HUMAN	wn81b06.x1 NCL_CGAP_Uf1 Homo sapiens cDNA clone IMAGE:2452211 3'
8406	18282	28535	6.4	2.0E-64	AI922911.1	EST_HUMAN	wn81b06.x1 NCL_CGAP_Uf1 Homo sapiens cDNA clone IMAGE:2452211 3'
9182	18921	25347	1.73	2.0E-64	8567387	NT	Homo sapiens period (Drosophila) homolog 3 (PER3), mRNA
9617	19195		2.68	2.0E-64	H55162.1	EST_HUMAN	CHR220101 Chromosome 22 exon Homo sapiens cDNA clone C22_132 5'
258	10224	20039	1.74	1.0E-64	AF231919.1	NT	Homo sapiens chromosome 21 unknown mRNA
1740	11641	21508	5.88	1.0E-64	AI929419.1	EST_HUMAN	au60c01.x1 Schneider fetal brain 00004 Homo sapiens cDNA clone IMAGE:2519136 3' similar to gb:L21696_cds1 PROTHYMOSIN ALPHA (HUMAN); contains element MSR1 repetitive element ;
3466	13382	23188	5.61	1.0E-64	AF106779.1	NT	Homo sapiens transcription factor (GHM enhancer 3, JM11 protein, JM4 protein, JM5 protein, T54 protein, JM10 protein, A4 differentiation-dependent protein, triple LIM domain protein 6, and synaptophysin genes, complete cds; and L-type calcium channel a>
3536	13452	23248	1.32	1.0E-64	AF228527.1	NT	Homo sapiens TRIAD3 mRNA, partial cds
3536	13452	23249	1.32	1.0E-64	AF228527.1	NT	Homo sapiens TRIAD3 mRNA, partial cds
9154	18904		1.62	1.0E-64	AL163246.2	NT	Homo sapiens chromosome 21 segment HS21C046
2230	12115	22017	0.93	9.0E-65	X89211.1	NT	H.sapiens DNA for endogenous retroviral like element
2230	12115	22018	0.93	9.0E-65	X89211.1	NT	H.sapiens DNA for endogenous retroviral like element
8822	18635		15.1	9.0E-65	BF330676.1	EST_HUMAN	QV4-BT0257-081199-017-e03 BT0257 Homo sapiens cDNA
8799	18613	28903	10.83	8.0E-65	AI929244.1	EST_HUMAN	au58h07.x1 Schneider fetal brain 00004 Homo sapiens cDNA clone IMAGE:2519005 3' similar to SW:RL21_HUMAN P46778 60S RIBOSOMAL PROTEIN L21.;
7841	17091	27936	2.05	7.0E-65	BE081653.1	EST_HUMAN	QV2-BT0635-240400-162-c02 BT0635 Homo sapiens cDNA
1040	10958	20801	1.52	6.0E-65	AV721898.1	EST_HUMAN	AV721898 HTB Homo sapiens cDNA clone HTBBZC06 5'
1880	11776		8.32	6.0E-65	AA550929.1	EST_HUMAN	nj86d10.s1 NCL_CGAP_P11 Homo sapiens cDNA clone IMAGE:999379 similar to gb:K03002 60S RIBOSOMAL PROTEIN L32 (HUMAN);
7080	16957	27150	2.52	6.0E-65	AW083252.1	EST_HUMAN	xc07b09.x1 NCL_CGAP_Co21 Homo sapiens cDNA clone IMAGE:2583545 3' similar to TR:Q63306 Q63306 LONG INTERSPERSED REPETITIVE DNA CONTAINING 7 ORFS.; contains L1.b2 L1 repetitive element ;
7209	17086	27275	4.25	6.0E-65	AA427878.1	EST_HUMAN	zw53b06.s1 Soares_total_fetus_Nb2HF8_9w Homo sapiens cDNA clone IMAGE:773747 3'
7209	17086	27276	4.25	6.0E-65	AA427878.1	EST_HUMAN	zw53b06.s1 Soares_total_fetus_Nb2HF8_9w Homo sapiens cDNA clone IMAGE:773747 3'
8247	18127	28375	6.18	6.0E-65	BE567816.1	EST_HUMAN	601340485F1 NIH_MGC_53 Homo sapiens cDNA clone IMAGE:3682677 5'
8787	18602	28892	4.76	6.0E-65	AL163210.2	NT	Homo sapiens chromosome 21 segment HS21C010



Table 4

## Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
615	10551	20362	0.91	5.0E-65	AF064604.1	NT	Homo sapiens KE03 protein mRNA, partial cds
1331	11238	21094	1.62	5.0E-65	7661951	NT	Homo sapiens KIAA0156 gene product (KIAA0156), mRNA
1331	11238	21095	1.62	5.0E-65	7661951	NT	Homo sapiens KIAA0156 gene product (KIAA0156), mRNA
2110	11999	21898	1.02	5.0E-65	AB033768.1	NT	Homo sapiens hPAD-colony10 mRNA for peptidylarginine deiminase type I, complete cds
3217	13141	22944	1.91	5.0E-65	4507848	NT	Homo sapiens ubiquitin specific protease 13 (isopeptidase T-3) (USP13) mRNA
3217	13141	22945	1.91	5.0E-65	4507848	NT	Homo sapiens ubiquitin specific protease 13 (isopeptidase T-3) (USP13) mRNA
186	10158	19975	1.09	4.0E-65	AL120419.1	EST_HUMAN	DKFZp761G108_r1 761 (synonym: hamy2) Homo sapiens cDNA clone DKFZp761G108 5'
728	10660	20491	1.56	4.0E-65	AI268468.1	EST_HUMAN	qm46e01.x1 Soares_placenta_8to9weeks_2NbHP8to9W Homo sapiens cDNA clone IMAGE:1891800 3'
728	10660	20492	1.56	4.0E-65	AI268468.1	EST_HUMAN	qm46e01.x1 Soares_placenta_8to9weeks_2NbHP8to9W Homo sapiens cDNA clone IMAGE:1891800 3'
1062	10978	20822	1.88	4.0E-65	4826735	NT	Homo sapiens fragile X mental retardation, autosomal homolog 1 (FXR1), mRNA
1470	11375	21240	8.28	4.0E-65	4506936	NT	Homo sapiens ribosomal protein L34 (RPL34) mRNA
2288	12171	22068	1.03	4.0E-65	BE221469.1	EST_HUMAN	hu25e04.x1 NCI_CGAP_Mel15 Homo sapiens cDNA clone IMAGE:3171102 3'
2288	12171	22069	1.03	4.0E-65	BE221469.1	EST_HUMAN	hu25e04.x1 NCI_CGAP_Mel15 Homo sapiens cDNA clone IMAGE:3171102 3'
5138	15005	24775	0.95	4.0E-65	9055269	NT	Homo sapiens low density lipoprotein receptor related protein-deleted in tumor (LRPDI1), mRNA
5138	15005	24776	0.95	4.0E-65	9055269	NT	Homo sapiens low density lipoprotein receptor related protein-deleted in tumor (LRPDI1), mRNA
5740	15648	25754	3.93	4.0E-65	AB033093.1	NT	Homo sapiens mRNA for KIAA1267 protein, partial cds
5740	15648	25755	3.93	4.0E-65	AB033093.1	NT	Homo sapiens mRNA for KIAA1267 protein, partial cds
6285	16149	26304	2.29	4.0E-65	11545780	NT	Homo sapiens hypothetical protein FLJ22087 (FLJ22087), mRNA
8020	17670		2.17	4.0E-65	AJ277546.2	NT	Homo sapiens WEE1 gene for protein kinase and partial ZNF143 gene for zinc finger transcription factor
8446	18320	28579	7.47	4.0E-65	AF119846.1	NT	Homo sapiens PRO1474 mRNA, complete cds
9471	10978	20822	1.34	4.0E-65	4826735	NT	Homo sapiens fragile X mental retardation, autosomal homolog 1 (FXR1), mRNA
9975	19434	25152	1.58	4.0E-65	11430460	NT	Homo sapiens low density lipoprotein-related protein 2 (LRP2), mRNA
1212	12646		5.37	3.0E-65	X78932.1	NT	H. sapiens HZF9 mRNA for zinc finger protein
1780	11679	21557	1.14	3.0E-65	AI000692.1	EST_HUMAN	ov23f03.s1 Soares_testis_NHT Homo sapiens cDNA clone IMAGE:1638173 3' similar to contains element MSR1 repetitive element ;
3239	13162	22962	1.39	3.0E-65	4504950	NT	Homo sapiens laminin, beta 1 (LAMB1), mRNA
3660	13574	23361	0.98	3.0E-65	AI000692.1	EST_HUMAN	ov23f03.s1 Soares_testis_NHT Homo sapiens cDNA clone IMAGE:1638173 3' similar to contains element MSR1 repetitive element ;
4551	14444	24228	1.41	3.0E-65	6912385	NT	Homo sapiens rab8 GTPase activating protein (GAP and centrosome-associated) (GAPCENA), mRNA
7793	17643	27876	1.43	3.0E-65	BE787366.1	EST_HUMAN	601479660F1 NIH_MGC_68 Homo sapiens cDNA clone IMAGE:3882405 5'

Page 259 of 413  
Table 4

Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
8693	17877	28119	9.69	3.0E-65	AA430006.1	EST_HUMAN	z665a06.1 Soares_testis_NHT Homo sapiens cDNA clone IMAGE:781042 5'
3358	13277	23078	5.27	2.0E-65	BF580294.1	EST_HUMAN	602155062F1 NIH_MGC_83 Homo sapiens cDNA clone IMAGE:4295966 5'
5938	15843		4.55	2.0E-65	BE263373.1	EST_HUMAN	601190883F1 NIH_MGC_7 Homo sapiens cDNA clone IMAGE:3534741 5'
6233	16099	26247	23.12	2.0E-65	BF576922.1	EST_HUMAN	602134359F1 NIH_MGC_81 Homo sapiens cDNA clone IMAGE:4289295 5'
7133	17010	27202	1.27	2.0E-65	AK024463.1	NT	Homo sapiens mRNA for FLJ00056 protein, partial cds
7133	17010	27203	1.27	2.0E-65	AK024463.1	NT	Homo sapiens mRNA for FLJ00056 protein, partial cds
8048	17939	28189	2.85	2.0E-65	11419247	NT	Homo sapiens SWI/SNF related, matrix associated, actin dependent regulator of chromatin, subfamily d, member 3 (SMARCD3), mRNA
9109	18874		4.15	2.0E-65	AA307904.1	EST_HUMAN	ES1178755 Colon carcinoma (HCC) cell line Homo sapiens cDNA 5' end similar to endogenous retrovirus
9580	19504		2.37	2.0E-65	BF246086.1	EST_HUMAN	601854033F1 NIH_MGC_57 Homo sapiens cDNA clone IMAGE:4073769 5'
85	10069		1.06	1.0E-65	BF125544.1	EST_HUMAN	601763488F1 NIH_MGC_20 Homo sapiens cDNA clone IMAGE:4026501 5'
528	10470	20282	1.32	1.0E-65	7657495	NT	Homo sapiens putative Rab5 GDP/GTP exchange factor homologue (RABEX5), mRNA
1904	11888	21781	0.91	1.0E-65	AB040946.1	NT	Homo sapiens mRNA for KIAA1513 protein, partial cds
3326	13246	23052	0.89	1.0E-65	BE466881.1	EST_HUMAN	hz24a09.x1 NCL_CGAP_G06 Homo sapiens cDNA clone IMAGE:3208888 3'
3917	13826	23606	2.13	1.0E-65	4504082	NT	Homo sapiens glycican 4 (GPC4) mRNA
3917	13826	23607	2.13	1.0E-65	4504082	NT	Homo sapiens glycican 4 (GPC4) mRNA
4112	14012	23789	2.37	1.0E-65	AW029340.1	EST_HUMAN	wx09c09.x1 NCL_CGAP_Gas4 Homo sapiens cDNA clone IMAGE:2543152 3'
4112	14012	23790	2.37	1.0E-65	AW029340.1	EST_HUMAN	wx09c09.x1 NCL_CGAP_Gas4 Homo sapiens cDNA clone IMAGE:2543152 3'
6802	16681	26870	1.58	1.0E-65	AW820481.1	EST_HUMAN	QV2-ST0298-140200-042-f12 ST0298 Homo sapiens cDNA
6802	16681	26871	1.58	1.0E-65	AW820481.1	EST_HUMAN	QV2-ST0298-140200-042-f12 ST0298 Homo sapiens cDNA
6842	16721	26914	2.38	1.0E-65	AU141295.1	EST_HUMAN	AU141295 THYRO1 Homo sapiens cDNA clone THYRO1000356 5'
6842	16721	26915	2.38	1.0E-65	AU141295.1	EST_HUMAN	AU141295 THYRO1 Homo sapiens cDNA clone THYRO1000356 5'
7132	17009	27201	1.76	1.0E-65	BF698707.1	EST_HUMAN	602126239F1 NIH_MGC_56 Homo sapiens cDNA clone IMAGE:4283313 5'
7215	17092	27282	1.62	1.0E-65	AU129040.1	EST_HUMAN	AU129040 NT2RP2 Homo sapiens cDNA clone NT2RP2004714 5'
7215	17092	27283	1.62	1.0E-65	AU129040.1	EST_HUMAN	AU129040 NT2RP2 Homo sapiens cDNA clone NT2RP2004714 5'
7222	17099		2.83	1.0E-65	11431994	NT	Homo sapiens inositol 1,4,5-trisphosphate receptor, type 1 (ITPR1), mRNA
7456	17265	27469	6	1.0E-65	AI191716.1	EST_HUMAN	qd56a02.x1 Soares_testis_NHT Homo sapiens cDNA clone IMAGE:1733450 3' similar to gb:M29581 ZINC FINGER PROTEIN 8 (HUMAN); contains MER19.t1 MER19 repetitive element;
7687	17537	27763	1.25	1.0E-65	AU153793.1	EST_HUMAN	AU153793 NT2RP3 Homo sapiens cDNA clone NT2RP3004016 3'
8042	17933	28181	2.23	1.0E-65	M28167.1	NT	Human platelet factor 4 variation 1 (PF4var1) gene, complete cds
8158	18046	28298	12.99	1.0E-65	4506660	NT	Homo sapiens ribosomal protein L7a (RPL7A) mRNA
8473	18346	28610	2.13	1.0E-65	BF698707.1	EST_HUMAN	602126239F1 NIH_MGC_56 Homo sapiens cDNA clone IMAGE:4283313 5'

Table 4

## Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
8542	18414	28681	2.35	1.0E-65	AI621017.1	EST_HUMAN	ts76a06.x1 NCL_CGAP_GC6 Homo sapiens cDNA clone IMAGE:2237170 3' similar to gb.L15533_ma1
9155	18905		2.27	1.0E-65	11418041	NT	PANCREATITIS ASSOCIATED PROTEIN 1 PRECURSOR (HUMAN);
9254	18963	25318	4.85	1.0E-65	11418322	NT	Homo sapiens TNF-inducible protein CG12-1 (CG12-1), mRNA
9665	19225		1.44	1.0E-65	11418248	NT	Homo sapiens cadherin EGF LAG seven-pass G-type receptor 1 (CELSR1), mRNA
65	10051	19864	1.51	9.0E-66	AL160311.1	NT	Homo sapiens sulfotransferase-related protein (SUL TX3), mRNA
65	10051	19865	1.51	9.0E-66	AL160311.1	NT	Novel human gene mapping to chromosome 22
1332	11239	21096	2.49	9.0E-66	5031980	NT	Novel human gene mapping to chromosome 22
1332	11239	21097	2.49	9.0E-66	5031980	NT	Homo sapiens 26S proteasome-associated pad1 homolog (POH1) mRNA
1468	11373		4.18	9.0E-66	M87299.1	NT	Homo sapiens 26S proteasome-associated pad1 homolog (POH1) mRNA
3826	13738	23529	0.9	9.0E-66	M72393.1	NT	Human transposon-like element, partial
3826	13738	23530	0.9	9.0E-66	M72393.1	NT	Human calcium-dependent phospholipid-binding protein (PLA2) mRNA, complete cds
4591	14479	24266	0.88	8.0E-66	AA424304.1	EST_HUMAN	Human calcium-dependent phospholipid-binding protein (PLA2) mRNA, complete cds
8654	18543		1.73	7.0E-66	BE064410.1	EST_HUMAN	z900c05.t1 Soares NIHMPu_S1 Homo sapiens cDNA clone IMAGE:767048 5'
							RC4-BT0311-141199-011-h06 BT0311 Homo sapiens cDNA
4269	14168	23944	1.22	6.0E-66	AI924653.1	EST_HUMAN	wn57h07.x1 NCL_CGAP_Lu19 Homo sapiens cDNA clone IMAGE:2449597 3' similar to WP.F15G9.4A
							CE18595 ;
4269	14168	23945	1.22	6.0E-66	AI924653.1	EST_HUMAN	wn57h07.x1 NCL_CGAP_Lu19 Homo sapiens cDNA clone IMAGE:2449597 3' similar to WP.F15G9.4A
							CE18595 ;
4269	14168	23946	1.22	6.0E-66	AI924653.1	EST_HUMAN	wn57h07.x1 NCL_CGAP_Lu19 Homo sapiens cDNA clone IMAGE:2449597 3' similar to WP.F15G9.4A
8499	18372	28636	7.07	6.0E-66	X69181.1	NT	CE18595 ;
1344	11250	21107	2.25	5.0E-66	BE064410.1	EST_HUMAN	H. sapiens mRNA for ribosomal protein L31
7357	17225	27424	12.31	5.0E-66	11420557	NT	RC4-BT0311-141199-011-h06 BT0311 Homo sapiens cDNA
773	10703	20542	0.79	4.0E-66	6679816	NT	Homo sapiens thyroid hormone receptor binding protein (AIB3), mRNA
2235	12120	22022	1.94	4.0E-66	X89211.1	NT	Mus musculus fragile X mental retardation syndrome 1 homolog (Fmr1), mRNA
2425	12302		3.66	4.0E-66	AJ223364.1	NT	H. sapiens DNA for endogenous retroviral like element
4674	14560		5.15	4.0E-66	9635487	NT	Homo sapiens germ-line DNA upstream of Jkappa locus
							Human endogenous retrovirus, complete genome
5407	15326	25376	3.35	4.0E-66	11428643	NT	Homo sapiens methylene tetrahydrofolate dehydrogenase (NAD+ dependent), methenyltetrahydrofolate
							cyclohydrolase (MTHFD2), mRNA
5512	15430	25494	1.78	4.0E-66	AW939119.1	EST_HUMAN	QV1-DT0069-110200-067-g10 DT0069 Homo sapiens cDNA
6096	15106	24869	4.71	4.0E-66	AW965473.1	EST_HUMAN	EST377546 IMAGE_resequences, MAGI Homo sapiens cDNA
6232	16098	28246	6.89	4.0E-66	U78168.1	NT	Homo sapiens cAMP-regulated guanine nucleotide exchange factor I (cAMP-GEFI) mRNA, complete cds
6708	16588	26776	6.38	4.0E-66	11421638	NT	Homo sapiens hypothetical protein FLJ20116 (FLJ20116), mRNA

Table 4

## Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Database Source	Top Hit Descriptor
8052	17943	28193	1.96	4.0E-66	EST_HUMAN	UI-H-BW1-amr-a-10-0-UJ.s1 NCI_CGAP_Sub7 Homo sapiens cDNA clone IMAGE:3070747 3'
1408	11313	21175	24.62	3.0E-66	4502098 NT	Homo sapiens solute carrier family 25 (mitochondrial carrier, adenine nucleotide translocator), member 5 (SLC25A5), nuclear gene encoding mitochondrial protein, mRNA
1408	11313	21176	24.62	3.0E-66	4502098 NT	Homo sapiens solute carrier family 25 (mitochondrial carrier, adenine nucleotide translocator), member 5 (SLC25A5), nuclear gene encoding mitochondrial protein, mRNA
1939	11834	21717	0.84	3.0E-66	EST_HUMAN	yz27g12.r1 Soares multiple_sclerosis_2NblHMSP Homo sapiens cDNA clone IMAGE:284326 5' similar to SW:H2B1_TIGCA P35068 HISTONE H2B.1/H2B.2. [2] PIR:B56612;
1939	11834	21718	0.84	3.0E-66	EST_HUMAN	yz27g12.r1 Soares multiple_sclerosis_2NblHMSP Homo sapiens cDNA clone IMAGE:284326 5' similar to SW:H2B1_TIGCA P35068 HISTONE H2B.1/H2B.2. [2] PIR:B56612;
1939	11834	21719	0.84	3.0E-66	EST_HUMAN	yz27g12.r1 Soares multiple_sclerosis_2NblHMSP Homo sapiens cDNA clone IMAGE:284326 5' similar to SW:H2B1_TIGCA P35068 HISTONE H2B.1/H2B.2. [2] PIR:B56612;
2075	12540	22430	2.91	3.0E-66	11141880 NT	Homo sapiens TGF(beta)-induced transcription factor 2 (TGIF2), mRNA
3079	13006	22797	5.47	3.0E-66	7662223 NT	Homo sapiens KIAA0649 gene product (KIAA0649), mRNA
5528	15445	25511	1.64	3.0E-66	11417946 NT	Homo sapiens NIPSNAP, C. elegans, homolog 1 (NIPSNAP1), mRNA
5528	15445	25512	1.64	3.0E-66	11417946 NT	Homo sapiens NIPSNAP, C. elegans, homolog 1 (NIPSNAP1), mRNA
8800	18614	28904	8.3	3.0E-66	5453949 NT	Homo sapiens protein phosphatase 2, regulatory subunit B (B56), alpha isoform (PPP2R5A) mRNA
45	10033	19837	1.02	2.0E-66	7657334 NT	Homo sapiens Missshapen/NIK-related kinase (MINK), mRNA
45	10033	19838	1.02	2.0E-66	7657334 NT	Homo sapiens Missshapen/NIK-related kinase (MINK), mRNA
416	9983	19774	0.93	2.0E-66	4505524 NT	Homo sapiens origin recognition complex, subunit 5 (yeast homolog)-like (ORC5L) mRNA, and translated products
416	9983	19775	0.93	2.0E-66	4505524 NT	Homo sapiens origin recognition complex, subunit 5 (yeast homolog)-like (ORC5L) mRNA, and translated products
1784	11682	21560	2.02	2.0E-66	AL163301.2 NT	Homo sapiens chromosome 21 segment HS21C101
2944	12871	22669	0.95	2.0E-66	X65859.1 NT	H. sapiens pseudogene for the low affinity IL-8 receptor
3975	13882	23657	0.86	2.0E-66	AF108389.1 NT	Homo sapiens sodium/calcium exchanger isoform NaCa3 (NCX1) mRNA, complete cds
4556	14448	24233	12.69	2.0E-66	AJ133287.2 NT	Homo sapiens HLA-B gene for human leucocyte antigen B
4556	14448	24234	12.69	2.0E-66	AJ133287.2 NT	Homo sapiens HLA-B gene for human leucocyte antigen B
7135	17012	27205	2.16	2.0E-66	N45480.1 EST_HUMAN	yy59c02.r1 Soares multiple_sclerosis_2NblHMSP Homo sapiens cDNA clone IMAGE:277826 5'
9475	19712		2.22	2.0E-66	11418318 NT	Homo sapiens G-2 and S-phase expressed 1 (GTSE1), mRNA
2864	12792	22586	1.38	1.0E-66	AV717817.1 EST_HUMAN	AV717817 DCB Homo sapiens cDNA clone DCBADC07 5'
2864	12792	22586	1.38	1.0E-66	AV717817.1 EST_HUMAN	AV717817 DCB Homo sapiens cDNA clone DCBADC07 5'
4288	12792	22585	3.26	1.0E-66	AV717817.1 EST_HUMAN	AV717817 DCB Homo sapiens cDNA clone DCBADC07 5'
4288	12792	22586	3.26	1.0E-66	AV717817.1 EST_HUMAN	AV717817 DCB Homo sapiens cDNA clone DCBADC07 5'

Page 262 of 413  
Table 4  
Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
5306	15227	25031	5.36	1.0E-66	BF573088.1	EST_HUMAN	602152996F1 NIH_MGC_81 Homo sapiens cDNA clone IMAGE:4294151 5'
6143	15991	26126	1.49	1.0E-66	BF328623.1	EST_HUMAN	RC5-BN0193-010900-034-G06 BN0193 Homo sapiens cDNA
6926	16804	26998	1.37	1.0E-66	AA668858.1	EST_HUMAN	aa80e04.s1 NCI_CGAP_GCB1 Homo sapiens cDNA clone IMAGE:827262 3'
8312	18189	28438	2.39	1.0E-66	AF111167.2	NT	Homo sapiens jun dimerization protein gene, partial cds; cfos gene, complete cds; and unknown gene
9260	18965		2.09	9.0E-67	11418177	NT	Homo sapiens Ran GTPase activating protein 1 (RANGAP1), mRNA
4829	14711		0.84	8.0E-67	M78158.1	EST_HUMAN	EST01750 Subtracted Hippocampus, Striatum (cat. #362205) Homo sapiens cDNA clone HHCPN31 similar to L1 repetitive element
376	10360	20184	6.19	7.0E-67	AW162232.1	EST_HUMAN	au75602.x1 Schneider fetal brain 00004 Homo sapiens cDNA clone IMAGE:2782083 3' similar to gb:M37104 ATP SYNTHASE COUPLING FACTOR 6, MITOCHONDRIAL PRECURSOR (HUMAN);
1360	11266	21122	2.63	7.0E-67	AA383416.1	EST_HUMAN	EST96812 Testis 1 Homo sapiens cDNA 5' end similar to similar to C. elegans hypothetical protein, cosmid ZK353
1535	11439	21296	1	7.0E-67	W85947.1	EST_HUMAN	zh56b05.r1 Soares_fetal_liver_spleen_NFLS_S1 Homo sapiens cDNA clone IMAGE:416049 5'
1535	11439	21297	1	7.0E-67	W85947.1	EST_HUMAN	zh56b05.r1 Soares_fetal_liver_spleen_NFLS_S1 Homo sapiens cDNA clone IMAGE:416049 5'
1988	11881	21773	1.06	7.0E-67	7657243	NT	Homo sapiens inositol 1,3,4-triphosphate 5/6 kinase (ITPK1), mRNA
1988	11881	21774	1.06	7.0E-67	7657243	NT	Homo sapiens inositol 1,3,4-triphosphate 5/6 kinase (ITPK1), mRNA
2779	10360	20184	7.07	7.0E-67	AW162232.1	EST_HUMAN	au75602.x1 Schneider fetal brain 00004 Homo sapiens cDNA clone IMAGE:2782083 3' similar to gb:M37104 ATP SYNTHASE COUPLING FACTOR 6, MITOCHONDRIAL PRECURSOR (HUMAN);
5793	15699	25807	2.04	7.0E-67	11425572	NT	Homo sapiens adaptor-related protein complex 2, beta 1 subunit (AP2B1), mRNA
5793	15699	25808	2.04	7.0E-67	11425572	NT	Homo sapiens adaptor-related protein complex 2, beta 1 subunit (AP2B1), mRNA
9039	18826	29111	1.56	7.0E-67	11430460	NT	Homo sapiens low density lipoprotein-related protein 2 (LRP2), mRNA
9039	18826	29112	1.56	7.0E-67	11430460	NT	Homo sapiens low density lipoprotein-related protein 2 (LRP2), mRNA
9501	19116	25292	3.33	7.0E-67	AB011399.1	NT	Homo sapiens gene for AF-6, complete cds
9868	19357		1.43	7.0E-67	11421527	NT	Homo sapiens calcium channel, voltage-dependent, alpha 2/delta subunit 1 (CACNA2D1), mRNA
547	10488	20297	1.32	6.0E-67	X68968.1	NT	H.sapiens mRNA for acetyl-CoA carboxylase
778	10708	20547	1.5	6.0E-67	Z17227.1	NT	Homo sapiens mRNA for transmembrane receptor protein
1252	11159	21008	0.93	6.0E-67	Y14320.1	NT	Homo sapiens PMP69 gene, exons 3,4,5,6 & 7
3131	13056	22856	1.24	6.0E-67	4508434	NT	Homo sapiens retinoblastoma 1 (including osteosarcoma) (RB1) mRNA
3391	13308	23106	1.2	6.0E-67	4507332	NT	Homo sapiens Synapsin III (SYN3) mRNA, and translated products
3391	13308	23107	1.2	6.0E-67	4507332	NT	Homo sapiens Synapsin III (SYN3) mRNA, and translated products
4035	13938	23714	1.28	6.0E-67	AL163201.2	NT	Homo sapiens chromosome 21 segment HS21C001
4035	13938	23715	1.28	6.0E-67	AL163201.2	NT	Homo sapiens chromosome 21 segment HS21C001
4607	14495	24283	3.37	6.0E-67	7657020	NT	Homo sapiens DKFZp434P211 protein (DKFZP434P211), mRNA
4607	14495	24284	3.37	6.0E-67	7657020	NT	Homo sapiens DKFZp434P211 protein (DKFZP434P211), mRNA

Page 263 of 413  
Table 4  
Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
5125	14761		2.1	6.0E-67	4507848	NT	Homo sapiens ubiquitin specific protease 13 (isopeptidase T-3) (USP13) mRNA
3184	13109	22913	2.45	5.0E-67	AF009660.1	NT	Homo sapiens T cell receptor beta locus, TCRBV7S3A2 to TCRBV12S2 region
8352	18229		2.1	5.0E-67	BE010038.1	EST_HUMAN	PM3-BN0176-100400-001-g04 BN0176 Homo sapiens cDNA
1306	11213	21069	1.83	4.0E-67	R90819.1	EST_HUMAN	yn02d1.1.1 Soares adult brain N2b4HB55Y Homo sapiens cDNA clone IMAGE:167253 5'
6883	16762		1.22	4.0E-67	BF357321.1	EST_HUMAN	RC0-HT0934-150900-026-c03 HT0934 Homo sapiens cDNA
8416	18290		2.3	4.0E-67	AA714294.1	EST_HUMAN	nw06a01.s1 NCI_CGAP_SS1 Homo sapiens cDNA clone IMAGE:1238472 3' similar to TR:O10385 O10385
2782	10553	20365	0.93	3.0E-67	AA333788.1	EST_HUMAN	PRO-POL-DUTPASE POLYPROTEIN ;
3407	13324	23125	1.14	3.0E-67	BE084410.1	EST_HUMAN	EST37903 Embryo, 9 week Homo sapiens cDNA 5' end
4596	14484	24270	3.14	3.0E-67	AW869159.1	EST_HUMAN	RC4-BT0311-141199-011-h06 BT0311 Homo sapiens cDNA
6760	16639	26827	1.22	3.0E-67	BF196068.1	EST_HUMAN	MR3-SN0066-040500-008-f01 SN0066 Homo sapiens cDNA
8583	18451		19.27	3.0E-67	AA927874.1	EST_HUMAN	h81f05.x1 NCI_CGAP_Kid11 Homo sapiens cDNA clone IMAGE:3134913 3' similar to SW:RHOP_MOUSE
180	10152	19967	1.94	2.0E-67	BE348354.1	EST_HUMAN	Q61085 GTP-RHO BINDING PROTEIN 1 ;
827	10754	20604	6	2.0E-67	AW816405.1	EST_HUMAN	om18b07.s1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:1541365 3'
1089	11005		1.74	2.0E-67	AF167460.1	NT	hw16g09.x1 NCI_CGAP_Lu24 Homo sapiens cDNA clone IMAGE:3183136 3' similar to WP:F23H11.9
1841	11737	21614	1.5	2.0E-67	BE303037.1	EST_HUMAN	CE09617 ;
1841	11737	21615	1.5	2.0E-67	BE303037.1	EST_HUMAN	QV4-ST0234-181199-037-f05 ST0234 Homo sapiens cDNA
2336	12216	22116	0.98	2.0E-67	AF309561.1	NT	Homo sapiens double stranded RNA activated protein kinase (PKR) gene, exons 2a, 2, 3, and 4
2381	12261	22153	1.2	2.0E-67	4758795	NT	ba72g05.y1 NIH_MGC_20 Homo sapiens cDNA clone IMAGE:2905976 5' similar to TR:O94892 O94892
3422	13339	23144	3.9	2.0E-67	AA625755.1	EST_HUMAN	KIAA0798 PROTEIN ;
3921	13830	23610	2.33	2.0E-67	AL163300.2	NT	ba72g05.y1 NIH_MGC_20 Homo sapiens cDNA clone IMAGE:2905976 5' similar to TR:O94892 O94892
5724	15631	25734	4.22	2.0E-67	BF240758.1	EST_HUMAN	Homo sapiens KRAB zinc finger protein ZFQR mRNA, complete cds
5803	15708	25820	2.17	2.0E-67	AB051763.1	NT	z091g01.s1 Soares_testis_NHT Homo sapiens cDNA clone IMAGE:745392 3'
5803	15708	25821	2.17	2.0E-67	AB051763.1	NT	Homo sapiens chromosome 21 segment HS21C100
7202	17079	27264	1.34	2.0E-67	AW602635.1	EST_HUMAN	601875351F1 NIH_MGC_55 Homo sapiens cDNA clone IMAGE:4091893 5'
7202	17079	27265	1.34	2.0E-67	AW602635.1	EST_HUMAN	Homo sapiens mRNA for NADPH-cytochrome P-450 reductase, complete cds
8409	19769		3.26	2.0E-67	11436448	NT	Homo sapiens mRNA for NADPH-cytochrome P-450 reductase, complete cds
8558	18428	28698	1.77	2.0E-67	BE295714.1	EST_HUMAN	RC4-BT0566-170100-011-c07 BT0566 Homo sapiens cDNA
8751	17900	28144	2.26	2.0E-67	BF377169.1	EST_HUMAN	RC4-BT0566-170100-011-c07 BT0566 Homo sapiens cDNA
9388	19577	25069	2.6	2.0E-67	11418189	NT	Homo sapiens KIAA0985 protein (KIAA0985), mRNA
							601175762F1 NIH_MGC_17 Homo sapiens cDNA clone IMAGE:3531038 5'
							PM2-TN0103-040900-001-c02 TN0103 Homo sapiens cDNA
							Homo sapiens thyroid autoantigen 70kD (Ku antigen) (G22P1), mRNA

Page 264 of 413  
Table 4  
Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
253	10219	20036	4.37	1.0E-67	4502166	NT	Homo sapiens amyloid beta (A4) precursor protein (protease nexin-II, Alzheimer disease) (APP), mRNA
2129	12017	21915	2.46	8.0E-68	BE870732.1	EST_HUMAN	601448558F1 NIH_MGC_65 Homo sapiens cDNA clone IMAGE:3852254 5'
3794	13706	23492	4.96	8.0E-68	AA209456.1	EST_HUMAN	zq82h10.r1 Strategene hNT neuron (#937233) Homo sapiens cDNA clone IMAGE:648163 5' similar to SW:SAV_SULAC Q07590 SAV PROTEIN. ;
3794	13706	23493	4.96	8.0E-68	AA209456.1	EST_HUMAN	zq82h10.r1 Strategene hNT neuron (#937233) Homo sapiens cDNA clone IMAGE:648163 5' similar to SW:SAV_SULAC Q07590 SAV PROTEIN. ;
1849	11745		2.2	6.0E-68	AW503842.1	EST_HUMAN	UI-HF-BNO-alb-c-07-0-UI.r1 NIH_MGC_50 Homo sapiens cDNA clone IMAGE:3078924 5'
7971	17821	28064	2.46	6.0E-68	11422086	NT	Homo sapiens killer inhibitory receptor 2-2-1 (KIR221) and killer inhibitory receptor 2-2-2 (KIR222) genes, partial cds
8489	18362	28627	1.93	6.0E-68	AF133901.1	NT	Homo sapiens chromosome 21 unknown mRNA
9676	19234		1.42	6.0E-68	BE612554.1	EST_HUMAN	601452067F1 NIH_MGC_66 Homo sapiens cDNA clone IMAGE:3855761 5'
9918	19391	25178	1.36	6.0E-68	BF310675.1	EST_HUMAN	601894635F2 NIH_MGC_19 Homo sapiens cDNA clone IMAGE:4124144 5'
785	12642	20555	0.87	5.0E-68	AF231919.1	NT	Homo sapiens chromosome 21 unknown mRNA
785	12642	20556	0.87	5.0E-68	AF231919.1	NT	Homo sapiens chromosome 21 unknown mRNA
802	10731	20572	3.87	5.0E-68	AF231919.1	NT	Homo sapiens chromosome 21 unknown mRNA
802	10731	20573	3.87	5.0E-68	AF231919.1	NT	Homo sapiens chromosome 21 unknown mRNA
3108	13034	22830	2.62	5.0E-68	AB037852.1	NT	Homo sapiens mRNA for KIAA1431 protein, partial cds
2480	12356	22247	1.01	4.0E-68	11421388	NT	Homo sapiens transcription factor NRF (NRF), mRNA
2480	12356	22248	1.01	4.0E-68	11421388	NT	Homo sapiens transcription factor NRF (NRF), mRNA
4900	14780		17.24	4.0E-68	P04406	SWISSPROT	GLYCERALDEHYDE 3-PHOSPHATE DEHYDROGENASE, LIVER
6061	16044	26188	5.64	4.0E-68	11055991	NT	Homo sapiens serine carboxypeptidase 1 precursor protein (HSCPT), mRNA
6061	16044	26189	5.64	4.0E-68	11055991	NT	Homo sapiens serine carboxypeptidase 1 precursor protein (HSCPT), mRNA
7225	17102	27290	5.41	4.0E-68	D63479.2	NT	Homo sapiens mRNA for KIAA0145 protein, partial cds
7225	17102	27291	5.41	4.0E-68	D63479.2	NT	Homo sapiens mRNA for KIAA0145 protein, partial cds
7295	17171	27371	2.39	4.0E-68	AB040918.1	NT	Homo sapiens mRNA for KIAA1485 protein, partial cds
3611	13525	23312	5.61	3.0E-68	AF236082.1	NT	Mus musculus G-protein coupled receptor GPR73 (Gpr73) mRNA, complete cds
7441	16454		4.44	3.0E-68	A1342923.1	EST_HUMAN	q38h02.x1 Soares_fetal_lung_NbHL19W Homo sapiens cDNA clone IMAGE:1950291 3' similar to contains THR.12 THR repetitive element ;
7997	17847	28088	1.45	3.0E-68	F28784.1	EST_HUMAN	HSPD18178 HM3 Homo sapiens cDNA clone s3000023D09
9872	19502		1.53	3.0E-68	AW939485.1	EST_HUMAN	QV1-DT0072-010200-056-h06 DT0072 Homo sapiens cDNA
2832	15076		12.26	2.0E-68	D00522.1	NT	Cricetus longicaudatus mRNA for EF-1 alpha, complete cds
4583	14473	24261	1.66	2.0E-68	AB009681.1	NT	Homo sapiens gene for activin receptor type IIB, complete cds
6110	16004		8	2.0E-68	R45088.1	EST_HUMAN	yg88g04.s1 Soares infant brain 1NIB Homo sapiens cDNA clone IMAGE:34896 3'



Page 265 of 413  
Table 4

Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
6202	15962	26095	4.79	2.0E-68	BF035316.1	EST_HUMAN	601458514F1 NIH_MGC_66 Homo sapiens cDNA clone IMAGE:3862034 5'
9148	19731		1.92	2.0E-68	BE897376.1	EST_HUMAN	601437367F1 NIH_MGC_72 Homo sapiens cDNA clone IMAGE:3922192 5'
72	10056	19873	1.31	1.0E-68	4505222	NT	Homo sapiens meningioma (disrupted in balanced translocation) 1 (MN1), mRNA
293	10257	20078	9.36	1.0E-68	AW1816405.1	EST_HUMAN	QV4-ST0234-181199-037-05 ST0234 Homo sapiens cDNA
2205	12092	21994	1.32	1.0E-68	AB011149.1	NT	Homo sapiens mRNA for KIAA0577 protein, complete cds
2205	12092	21995	1.32	1.0E-68	AB011149.1	NT	Homo sapiens mRNA for KIAA0577 protein, complete cds
2728	12590	22486	1.01	1.0E-68	AW451832.1	EST_HUMAN	UHH-B13-alk-f-01-UJ.s1 NC1_CGAP_Sub55 Homo sapiens cDNA clone IMAGE:2737272 3'
3928	13837	23617	0.95	1.0E-68	BE296032.1	EST_HUMAN	601177002F1 NIH_MGC_17 Homo sapiens cDNA clone IMAGE:3532344 5'
4954	14831	24598	0.98	1.0E-68	AA897343.1	EST_HUMAN	al47g12.s1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:1460518 3'
5261	15183	24959	1.57	1.0E-68	7862349	NT	Homo sapiens cell recognition molecule Caspr2 (KIAA0568), mRNA
8226	18108	28361	2.44	1.0E-68	11418869	NT	Homo sapiens phosphodiesterase 7B (PDE7B), mRNA
8226	18108	28362	2.44	1.0E-68	11418869	NT	Homo sapiens phosphodiesterase 7B (PDE7B), mRNA
8275	18155	28396	2.29	1.0E-68	L76416.1	NT	Homo sapiens MIF2 suppressor (HSM1T3) mRNA, complete cds
9659	10056	19873	1.95	1.0E-68	4505222	NT	Homo sapiens meningioma (disrupted in balanced translocation) 1 (MN1), mRNA
9862	19669	24991	1.38	1.0E-68	11430460	NT	Homo sapiens low density lipoprotein-related protein 2 (LRP2), mRNA
19	10006	19797	1.82	9.0E-69	5031976	NT	Homo sapiens pre-B-cell colony-enhancing factor (PBEF) mRNA
19	10006	19798	1.82	9.0E-69	5031976	NT	Homo sapiens pre-B-cell colony-enhancing factor (PBEF) mRNA
1011	10929	20772	1.63	9.0E-69	5031980	NT	Homo sapiens 26S proteasome-associated pad1 homolog (POH1) mRNA
1011	10929	20773	1.63	9.0E-69	5031980	NT	Homo sapiens 26S proteasome-associated pad1 homolog (POH1) mRNA
4037	13940	23718	0.78	9.0E-69	4757867	NT	Homo sapiens v-rat murine sarcoma viral oncogene homolog B1 (BRAF) mRNA
8263	18143		9.27	9.0E-69	AU117241.1	EST_HUMAN	AU117241 HEMBA1 Homo sapiens cDNA clone HEMBA1000968 5'
3340	13260		1.21	8.0E-69	AJ237744.1	NT	Homo sapiens RIBIR gene (partial), exon 12
5834	15740	25852	6.08	7.0E-69	9966912	NT	Homo sapiens actin-related protein 3-beta (ARP3BETA), mRNA
6589	16469	26659	3.61	6.0E-69	A192764.1	EST_HUMAN	qe62h01.x1 Soares_fetal_lung_NbHL19W Homo sapiens cDNA clone IMAGE:1743601 3' similar to gb:L11566 60S RIBOSOMAL PROTEIN L18 (HUMAN);
6589	16469	26660	3.61	6.0E-69	A192764.1	EST_HUMAN	qe62h01.x1 Soares_fetal_lung_NbHL19W Homo sapiens cDNA clone IMAGE:1743601 3' similar to gb:L11566 60S RIBOSOMAL PROTEIN L18 (HUMAN);
509	10451		1.88	4.0E-69	A1873630.1	EST_HUMAN	wm28h11.x1 NCL_CGAP_U14 Homo sapiens cDNA clone IMAGE:2437125 3'
5565	15481	25554	4.12	4.0E-69	A1764973.1	EST_HUMAN	wf57606.x1 NCL_CGAP_Kid11 Homo sapiens cDNA clone IMAGE:2384819 3' similar to TR:O55137
5995	15900	26024	2.43	4.0E-69	4557732	NT	O55137 ACYL-COA THIOESTERASE.;
5995	15900	26025	2.43	4.0E-69	4557732	NT	Homo sapiens latent transforming growth factor beta binding protein 2 (LTBP2) mRNA
380	10364	20187	2.81	3.0E-69	BE258012.1	EST_HUMAN	Homo sapiens latent transforming growth factor beta binding protein 2 (LTBP2) mRNA
596	10532	20340	1.64	3.0E-69	AF221712.1	NT	601110371F1 NIH_MGC_16 Homo sapiens cDNA clone IMAGE:3351352 5'
							Homo sapiens Smad- and Olf-interacting zinc finger protein mRNA, partial cds

Table 4

## Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
1536	11440		1.35	3.0E-69	T80514.1	EST_HUMAN	yd08a02.r1 Soares infant brain 1NIB Homo sapiens cDNA clone IMAGE:24880 5' similar to SP-A48836 A48836 SPEGF III=EGF REPEAT-CONTAINING FIBROPELIN-LIKE PROTEIN - SEA URCHIN ;
2325	12206		0.98	3.0E-69	5729910	NT	Homo sapiens lymphatic vessel endothelial hyaluronan receptor 1 (LYVE-1) mRNA
3590	13857	23674	0.96	3.0E-69	A1765888.1	EST_HUMAN	wh66g08.x1 NCL_CGAP_Kid11 Homo sapiens cDNA clone IMAGE:2385758 3'
5209	15087	29105	5.94	3.0E-69	11418185	NT	Homo sapiens aconitase 2, mitochondrial (ACO2), mRNA
6387	16249	26410	1.37	3.0E-69	U52351.1	NT	Homo sapiens arm-repeat protein NPRAP/neurojuncin (CTNND2) mRNA, partial cds
6457	16318	26485	8.43	3.0E-69	AF268075.1	NT	Homo sapiens TRAF6-binding protein T6BP mRNA, complete cds
7091	16968		1.26	3.0E-69	AA376399.1	EST_HUMAN	EST88807 HSC172 cells II Homo sapiens cDNA 5' end similar to similar to ribosomal protein S18
7417	17284	27491	1.54	3.0E-69	X13223.1	NT	H. sapiens mRNA for N-acetylglucosamide-(beta 1-4)-galactosyltransferase
7493	17363	27568	2.24	3.0E-69	X06233.1	NT	Human mRNA for calcium-binding protein in macrophages (MRP-14) macrophage migration inhibitory factor (MIF)-related protein
8036	17928	28174	3.07	3.0E-69	11492120	NT	Homo sapiens ribosomal protein S15a (RPS15A), mRNA
8215	18089		7.12	3.0E-69	AA376399.1	EST_HUMAN	EST88807 HSC172 cells II Homo sapiens cDNA 5' end similar to similar to ribosomal protein S18
9168	18911		4.13	3.0E-69	11419157	NT	Homo sapiens HGC6.2 protein (HGC6.2), mRNA
124	10344	20170	1	2.0E-69	AF160252.1	NT	Homo sapiens KIAA0553 protein gene, complete cds; and alpha1b protein gene, partial cds
124	10344	20171	1	2.0E-69	AF160252.1	NT	Homo sapiens KIAA0553 protein gene, complete cds; and alpha1b protein gene, partial cds
398	10344	20170	4.94	2.0E-69	AF160252.1	NT	Homo sapiens KIAA0553 protein gene, complete cds; and alpha1b protein gene, partial cds
398	10344	20171	4.94	2.0E-69	AF160252.1	NT	Homo sapiens KIAA0553 protein gene, complete cds; and alpha1b protein gene, partial cds
1842	11738	21616	1.2	2.0E-69	BE257857.1	EST_HUMAN	601109444F1 NIH_MGC_16 Homo sapiens cDNA clone IMAGE:3350074 5'
2813	12742		2.73	2.0E-69	AA431157.1	EST_HUMAN	zw71g02.r1 Soares testis_NHT Homo sapiens cDNA clone IMAGE:781682 5'
1675	11577	21445	2.35	1.0E-69	AF053768.1	NT	Rattus norvegicus brain specific cortactin-binding protein CBP90 mRNA, partial cds
5981	15886	26008	3.68	1.0E-69	AW393969.1	EST_HUMAN	QV0-TT0010-031199-045-c07 TT0010 Homo sapiens cDNA
6080	16083	26211	1.55	1.0E-69	7662263	NT	Homo sapiens KIAA0716 gene product (KIAA0716), mRNA
6080	16083	26212	1.55	1.0E-69	7662263	NT	Homo sapiens KIAA0716 gene product (KIAA0716), mRNA
6088	16033	26173	2.93	1.0E-69	AB032973.1	NT	Homo sapiens mRNA for KIAA1147 protein, partial cds
6088	16033	26174	2.93	1.0E-69	AB032973.1	NT	Homo sapiens mRNA for KIAA1147 protein, partial cds
7847	17697	27942	5.29	1.0E-69	BE245070.1	EST_HUMAN	TCBAP1E2678 Pediatric pre-B cell acute lymphoblastic leukemia Baylor-HGSC project=TCBA Homo sapiens cDNA clone TCBAP2678
7847	17697	27943	5.29	1.0E-69	BE245070.1	EST_HUMAN	TCBAP1E2678 Pediatric pre-B cell acute lymphoblastic leukemia Baylor-HGSC project=TCBA Homo sapiens cDNA clone TCBAP2678
8246	18126		23.27	1.0E-69	4504918	NT	Homo sapiens keratin 8 (KRT8) mRNA
9105	18872	28785	1.53	1.0E-69	BF125887.1	EST_HUMAN	601762902F1 NIH_MGC_20 Homo sapiens cDNA clone IMAGE:4025785 5'

Table 4

## Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
9510	19124		2.32	1.0E-69	AI809994.1	EST_HUMAN	wf64e08.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2360390 3' similar to contains Alu repetitive element; contains element MIR repetitive element;
2284	12717	22065	1.52	8.0E-70	AA230303.1	EST_HUMAN	nc13d12.r1 NCL_CGAP_P1 Homo sapiens cDNA clone IMAGE:1008023
4277	14176	23954	2.16	8.0E-70	L77666.1	NT	Homo sapiens DGS-I mRNA, 3' end
1771	11670	21547	1.93	7.0E-70	AI497807.1	EST_HUMAN	fm89f01.x1 NCL_CGAP_Bm25 Homo sapiens cDNA clone IMAGE:2165305 3'
1771	11670	21548	1.93	7.0E-70	AI497807.1	EST_HUMAN	fm89f01.x1 NCL_CGAP_Bm25 Homo sapiens cDNA clone IMAGE:2165305 3'
1888	11784	21660	1.63	7.0E-70	AA282955.1	EST_HUMAN	zt15h04.r1 NCL_CGAP_GCB1 Homo sapiens cDNA clone IMAGE:713239 5'
2018	11909		3.57	7.0E-70	5031668	NT	Homo sapiens tumor suppressor deleted in oral cancer-related 1 (DOC-1R) mRNA
4132	14032	23807	3.86	7.0E-70	4757723	NT	Homo sapiens adenylate cyclase 3 (ADCY3) mRNA
5389	15289	25124	5.28	7.0E-70	AB032369.1	NT	Homo sapiens MIST mRNA, partial cds
5389	15289	25125	5.28	7.0E-70	AB032369.1	NT	Homo sapiens MIST mRNA, partial cds
6138	15985	26120	1.89	7.0E-70	AJ000052.1	NT	Homo sapiens gene encoding splicing factor SF1, exons 2-8
6910	16788	26980	2.36	7.0E-70	AB037715.1	NT	Homo sapiens mRNA for KIAA1294 protein, partial cds
6910	16788	26981	2.36	7.0E-70	AB037715.1	NT	Homo sapiens mRNA for KIAA1294 protein, partial cds
7063	16940	27131	3.98	7.0E-70	M74099.1	NT	Human displacement protein (CCAAT) mRNA
7063	16940	27132	3.98	7.0E-70	M74099.1	NT	Human displacement protein (CCAAT) mRNA
7283	17159	27357	3.72	7.0E-70	X59841.1	NT	Human PBX3 mRNA
7283	17159	27358	3.72	7.0E-70	X59841.1	NT	Human PBX3 mRNA
7428	16441	26627	3.13	7.0E-70	AF153715.1	NT	Homo sapiens phospholipid scramblase 1 gene, exon 1 and 5' flanking region
7445	16457	26648	1.56	7.0E-70	11525964	NT	Homo sapiens karyopherin beta 2b, transportin (TRN2), mRNA
7445	16457	26649	1.56	7.0E-70	11525964	NT	Homo sapiens karyopherin beta 2b, transportin (TRN2), mRNA
8875	18687	28978	1.78	7.0E-70	11528319	NT	Homo sapiens HIR (histone cell cycle regulation defective, S. cerevisiae) homolog A (HIRA), mRNA
8875	18687	28979	1.78	7.0E-70	11528319	NT	Homo sapiens HIR (histone cell cycle regulation defective, S. cerevisiae) homolog A (HIRA), mRNA
883	10780	20630	1.93	6.0E-70	4502166	NT	Homo sapiens amyloid beta (A4) precursor protein (protease nexin-II, Alzheimer disease) (APP), mRNA
2090	11979	21874	1.36	6.0E-70	M30938.1	NT	Human Ku (p70/p80) subunit mRNA, complete cds
2461	12338	22232	0.99	6.0E-70	8923899	NT	Homo sapiens CMP-N-acetylneuraminic acid synthase (LOC55907), mRNA
2505	12723	22268	1.83	5.0E-70	7662307	NT	Homo sapiens KIAA0792 gene product (KIAA0792), mRNA
2505	12723	22269	1.83	5.0E-70	7662307	NT	Homo sapiens KIAA0792 gene product (KIAA0792), mRNA
9116	18879		1.73	5.0E-70	BE168034.1	EST_HUMAN	MR3-HT0487-150200-115-a06 HT0487 Homo sapiens cDNA
1571	11475	21332	0.89	3.0E-70	BE071796.1	EST_HUMAN	RC0-BT0522-071299-011-a12 BT0522 Homo sapiens cDNA
1571	11475	21333	0.89	3.0E-70	BE071796.1	EST_HUMAN	RC0-BT0522-071299-011-a12 BT0522 Homo sapiens cDNA

Page 268 of 413  
Table 4

Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
5945	15751	25865	3.88	3.0E-70	BF685233.1	EST_HUMAN	602141561F1 NIH_MGC_46 Homo sapiens cDNA clone IMAGE:4302806 5'
5945	15751	25866	3.88	3.0E-70	BF685233.1	EST_HUMAN	602141561F1 NIH_MGC_46 Homo sapiens cDNA clone IMAGE:4302806 5'
674	10808	20426	13.15	2.0E-70	N42161.1	EST_HUMAN	y07a10.r1 Soares melanocyte 2NbHM Homo sapiens cDNA clone IMAGE:270522 5' similar to SW:D3HI_RAT P29266 3-HYDROXYISOBUTYRATE DEHYDROGENASE PRECURSOR ;
674	10808	20427	13.15	2.0E-70	N42161.1	EST_HUMAN	y07a10.r1 Soares melanocyte 2NbHM Homo sapiens cDNA clone IMAGE:270522 5' similar to SW:D3HI_RAT P29266 3-HYDROXYISOBUTYRATE DEHYDROGENASE PRECURSOR ;
689	10822	20449	2.01	2.0E-70	A1246899.1	EST_HUMAN	qx51h01.x1 NCI_CGAP_Pan1 Homo sapiens cDNA clone IMAGE:2004913 3'
1004	10822	20766	1.7	2.0E-70	8923669	NT	Homo sapiens hypothetical protein FLJ20758 (FLJ20758), mRNA
1167	11079	20924	1.95	2.0E-70	7661983	NT	Homo sapiens KIAA0193 gene product (KIAA0193), mRNA
1167	11079	20925	1.95	2.0E-70	7661983	NT	Homo sapiens KIAA0193 gene product (KIAA0193), mRNA
1387	11292	21148	0.97	2.0E-70	BE467311.1	EST_HUMAN	h264c12.x1 NCI_CGAP_Lu24 Homo sapiens cDNA clone IMAGE:3212758 3'
1708	11609	21479	2.09	2.0E-70	AL163202.2	NT	Homo sapiens chromosome 21 segment HS21C002
2272	12156		3.62	2.0E-70	AA054010.1	EST_HUMAN	z48g04.r1 Soares retina N2b4HR Homo sapiens cDNA clone IMAGE:380214 5' similar to SW:GAG_HTL1A
3963	13870	23648	3.95	2.0E-70	M69181.1	NT	P03345 GAG POLYPEPTIDE ;
5385	15304	25156	8.05	2.0E-70	X72662.1	NT	Human nonmuscle myosin heavy chain-B (MYH10) mRNA, partial cds
5385	15304	25157	8.05	2.0E-70	X72662.1	NT	H.sapiens gene for schwannomin (CS8)
5766	15673	25780	1.42	2.0E-70	AF310105.1	NT	H.sapiens gene for schwannomin (CS8)
5999	15904	26028	1.88	2.0E-70	D12625.1	NT	Homo sapiens NALP1 mRNA, complete cds
6010	15915	26042	9.83	2.0E-70	AF123074.1	NT	Human mRNA for NF1 protein isoform (neurofibromin isoform), complete cds
6010	15915	26043	9.83	2.0E-70	AF123074.1	NT	Homo sapiens cytoplasmic dynein intermediate chain 1 mRNA, complete cds
6177	15134	24853	1.69	2.0E-70	11422642	NT	Homo sapiens cytoplasmic dynein intermediate chain 1 mRNA, complete cds
6618	16498	26695	7.67	2.0E-70	M21741.1	NT	Homo sapiens sialyltransferase 6 (N-acetylglucosaminide alpha 2,3-sialyltransferase) (SIAT6), mRNA
7835	17685	27930	1.3	2.0E-70	AF123303.1	NT	Human guanine nucleotide-binding protein alpha-subunit gene (G-s-alpha), exons 4 and 5
8422	18296	28550	3.19	2.0E-70	8923420	NT	Homo sapiens calcium-binding transporter mRNA, partial cds
8422	18296	28551	3.19	2.0E-70	8923420	NT	Homo sapiens hypothetical protein FLJ20450 (FLJ20450), mRNA
8908	18716	29010	5.82	2.0E-70	4503520	NT	Homo sapiens hypothetical protein FLJ20450 (FLJ20450), mRNA
9499	19114	25289	2.58	2.0E-70	11430460	NT	Homo sapiens eukaryotic translation initiation factor 3, subunit 6 (48kD) (EIF3S6) mRNA
9499	19114	25290	2.58	2.0E-70	11430460	NT	Homo sapiens low density lipoprotein-related protein 2 (LRP2), mRNA
							Homo sapiens low density lipoprotein-related protein 2 (LRP2), mRNA
							Homo sapiens transglutaminase 3 (E polypeptide, protein-glutamine-gamma-glutamyltransferase) (TGM3) mRNA
3347	13267		2.97	1.0E-70	4507476	NT	
7642	17492		2.57	1.0E-70	AA442292.1	EST_HUMAN	z54c03.r1 Soares testis_NHT Homo sapiens cDNA clone IMAGE:757444 5'
8305	18182	28429	13.73	1.0E-70	AV738538.1	EST_HUMAN	AV738538 CB Homo sapiens cDNA clone CBLGB10 5'

Page 269 of 413  
Table 4  
Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
5621	15536	25621	6.04	9.0E-71	AI143870.1	EST_HUMAN	qe04f01.x1 Soares_testis_NHT Homo sapiens cDNA clone IMAGE:1738009 3' similar to TR:O14045 O14045 PHOSPHOTRANSFERASE. ;
5621	15536	25622	6.04	9.0E-71	AI143870.1	EST_HUMAN	qe04f01.x1 Soares_testis_NHT Homo sapiens cDNA clone IMAGE:1738009 3' similar to TR:O14045 O14045 PHOSPHOTRANSFERASE. ;
6192	16077	26226	1.88	9.0E-71	AI654903.1	EST_HUMAN	wb52c05.x1 NCL_CGAP_GC6 Homo sapiens cDNA clone IMAGE:2309288 3' similar to TR:P97213 P97213 CDU2, CDU1, TCDD, TCDB, TCDE, TCDA, TCDC, CDD1, CDD2, CDD3, AND CDD4 GENES. ;
8811	16077	26226	4.65	9.0E-71	AI654903.1	EST_HUMAN	wb52c05.x1 NCL_CGAP_GC6 Homo sapiens cDNA clone IMAGE:2309288 3' similar to TR:P97213 P97213 CDU2, CDU1, TCDD, TCDB, TCDE, TCDA, TCDC, CDD1, CDD2, CDD3, AND CDD4 GENES. ;
7245	17122		1.97	8.0E-71	AA171451.1	EST_HUMAN	zp21d11.r1 Stratagene neuroepithelium (#937231) Homo sapiens cDNA clone IMAGE:610101 5' similar to TR:G1143061 G1143061 STRAIN XA34 POL ;
6363	16226	26386	7.91	7.0E-71	AA442230.1	EST_HUMAN	z60h06.r1 Soares_testis_NHT Homo sapiens cDNA clone IMAGE:759075 5' z91a06.s1 Soares_fetal_liver_spleen_1NFLS_S1 Homo sapiens cDNA clone IMAGE:462226 3'
7037	16914	27103	1.52	7.0E-71	AA705457.1	EST_HUMAN	Homo sapiens chromosome 21 segment HS21C010
8643	18507	28786	4.18	7.0E-71	AL163210.2	NT	Homo sapiens SP100-HMG nuclear autoantigen (SP100) mRNA, complete cds
2163	12050	21951	3.45	5.0E-71	AF056322.1	NT	QV4-ST0234-181199-037-05 ST0234 Homo sapiens cDNA w18h10.x1 NCL_CGAP_U11 Homo sapiens cDNA clone IMAGE:2425315 3'
4030	13933	23710	1.38	5.0E-71	AW818405.1	EST_HUMAN	Homo sapiens cyclin-dependent kinase 6 (CDK6) mRNA
5144	15011	24782	3.2	5.0E-71	AI829496.1	EST_HUMAN	Homo sapiens transcription factor WSTF mRNA, complete cds
5586	15501	25577	2.14	5.0E-71	4502740	NT	Human PreA4 gene for Alzheimer's disease A4 amyloid protein precursor (exon 2)
6434	16295	26487	1.59	5.0E-71	M38106.1	NT	Homo sapiens pro-platelet basic protein (includes platelet basic protein, beta-thromboglobulin, connective tissue-activating peptide III, neutrophil-activating peptide-2) (PPBP), mRNA
6548	16406	26585	19.78	5.0E-71	AF072810.1	NT	Homo sapiens similar to hypothetical protein FLJ20163 (H. sapiens) (LOC63325), mRNA
7702	17552		2.26	5.0E-71	X13467.1	NT	Homo sapiens calcineurin binding protein 1 (KIAA0330), mRNA
8348	18225	28477	1.9	5.0E-71	11436514	NT	Homo sapiens RNA binding motif protein 9 (RBM9), mRNA
8528	18400	28688	2	5.0E-71	11438089	NT	Homo sapiens tumor necrosis factor (ligand) superfamily, member 10 (TNFSF10) mRNA
9067	18848	29116	1.84	5.0E-71	11417862	NT	Equus caballus glyceraldehyde-3-phosphate dehydrogenase mRNA, partial cds
9411	19063		1.62	5.0E-71	11418039	NT	Equus caballus glyceraldehyde-3-phosphate dehydrogenase mRNA, partial cds
97	10082	19899	1.13	4.0E-71	4507592	NT	Homo sapiens hook1 protein (HOOK1), mRNA
347	10306	20123	115.63	4.0E-71	AF157626.1	NT	Homo sapiens hook1 protein (HOOK1), mRNA
347	10306	20124	115.63	4.0E-71	AF157626.1	NT	Homo sapiens plasminogen (PLG) mRNA
2850	12778	22566	0.88	4.0E-71	7705414	NT	Homo sapiens SP100-HMG nuclear autoantigen (SP100) mRNA, complete cds
2850	12778	22567	0.88	4.0E-71	7705414	NT	Homo sapiens putative heme-binding protein (SOUL), mRNA
2857	12785	22575	1.63	4.0E-71	4505880	NT	
4330	14227	24009	3.35	4.0E-71	AF056322.1	NT	
4913	14792	24567	4.99	4.0E-71	7657602	NT	

Page 270 of 413  
Table 4  
Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
8077	17968	28218	3.32	3.0E-71	AA557683.1	EST_HUMAN	n45h10.s1 NCL CGAP_P4 Homo sapiens cDNA clone IMAGE:1043683 similar to contains PTR5.13 PTR5 repetitive element ;
1210	11119	20968	2.52	2.0E-71	AL163206.2	NT	Homo sapiens chromosome 21 segment HS21C006
5259	15181	24957	6.96	2.0E-71	D87462.1	NT	Human mRNA for KIAA0272 gene, partial cds
5259	15181	24958	6.96	2.0E-71	D87462.1	NT	Human mRNA for KIAA0272 gene, partial cds
8022	17872	28114	2.56	2.0E-71	AF095703.1	NT	Homo sapiens short chain L-3-hydroxyacyl-CoA dehydrogenase precursor (HADHSC) gene, nuclear gene encoding mitochondrial protein, complete cds
8022	17872	28115	2.56	2.0E-71	AF095703.1	NT	Homo sapiens short chain L-3-hydroxyacyl-CoA dehydrogenase precursor (HADHSC) gene, nuclear gene encoding mitochondrial protein, complete cds
8079	17970	28219	2.3	2.0E-71	BE018477.1	EST_HUMAN	bb81a06.y1 NIH_MGC_10 Homo sapiens cDNA clone IMAGE:3048754 5' similar to SW:R23B_HUMAN P54727 UV EXCISION REPAIR PROTEIN PROTEIN RAD23 HOMOLOG B ;
9181	18920		6.22	2.0E-71	T95489.1	EST_HUMAN	ye43609.1 Soares fetal liver spleen 1NFLS Homo sapiens cDNA clone IMAGE:120520 5'
622	10559	20371	2.11	1.0E-71	A077927.1	EST_HUMAN	oy15e03.s1 Soares senescent fibroblasts NbHSF Homo sapiens cDNA clone IMAGE:1665916 3' similar to contains LOR1.b2 LOR1 repetitive element ;
926	10851	20699	1.93	1.0E-71	7706281	NT	Homo sapiens neuronal cell death-related protein (LOC51616), mRNA
1084	11000	20841	4.01	1.0E-71	AF205890.1	NT	Homo sapiens disabled-2 gene, exons 2 through 15 and complete cds
1317	11224	21080	10.59	1.0E-71	AF012872.1	NT	Homo sapiens phosphatidylinositol 4-kinase 230 (p14K230) mRNA, complete cds
2036	11927	21821	1.23	1.0E-71	AB017007.1	NT	Homo sapiens PMS2L16 mRNA, partial cds
2036	11927	21822	1.23	1.0E-71	AB017007.1	NT	Homo sapiens PMS2L16 mRNA, partial cds
2661	12528	22416	4.85	1.0E-71	7657153	NT	Homo sapiens hairy/enhancer-of-split related with YRPW motif-like (HEYL), mRNA
3457	13373	23179	1.17	1.0E-71	AF119665.1	NT	Homo sapiens inorganic pyrophosphatase mRNA, complete cds
3546	13462	23256	4.73	1.0E-71	AF246219.1	NT	Homo sapiens SNARE protein kinase SNAK mRNA, complete cds
3546	13462	23257	4.73	1.0E-71	AF246219.1	NT	Homo sapiens SNARE protein kinase SNAK mRNA, complete cds
3597	13511	23298	0.94	1.0E-71	BE122850.1	EST_HUMAN	02_15 Human Epidermal Keratinocyte Subtraction Library- Upregulated Transcripts Homo sapiens cDNA clone 02_15 5' similar to Homo sapiens chromosome 19
3597	13511	23299	0.94	1.0E-71	BE122850.1	EST_HUMAN	02_15 Human Epidermal Keratinocyte Subtraction Library- Upregulated Transcripts Homo sapiens cDNA clone 02_15 5' similar to Homo sapiens chromosome 19
3681	13595	23381	1.87	1.0E-71	AF218904.1	NT	Homo sapiens attractin precursor (ATRIN) gene, exon 19
4370	14266	24050	1.86	1.0E-71	D28476.1	NT	Human mRNA for KIAA0045 gene, complete cds
6044	15947	26079	1.4	1.0E-71	11426182	NT	Homo sapiens GCN5 (general control of amino-acid synthesis, yeast, homolog)-like 2 (GCN5L2), mRNA
6326	16189	26351	10.62	1.0E-71	U80753.1	NT	Homo sapiens CAGL79 mRNA, partial cds
6750	16629	26816	6.96	1.0E-71	11425430	NT	Homo sapiens myomesin (M-protein) 2 (165kD) (MYOM2), mRNA
6916	16794	26986	4.18	1.0E-71	8922811	NT	Homo sapiens hypothetical protein FLJ10998 (FLJ10998), mRNA

Table 4

## Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
6916	16704	26987	4.18	1.0E-71	8922811	NT	Homo sapiens hypothetical protein FLJ10998 (FLJ10998), mRNA
7748	17598	27820	6.49	1.0E-71	AY007643.1	NT	Homo sapiens cytochrome c oxidase subunit VIa-related protein gene, complete cds
7792	17642		3.39	1.0E-71	AV761217.1	EST_HUMAN	AV761217 MDS Homo sapiens cDNA clone MDSEIA03 5'
8184	18052		4.87	1.0E-71	AV761217.1	EST_HUMAN	AV761217 MDS Homo sapiens cDNA clone MDSEIA03 5'
8256	18136	28383	3.2	1.0E-71	11418903	NT	Homo sapiens coagulation factor XIII, A1 polypeptide (F13A1), mRNA
8486	18359	28623	2.33	1.0E-71	11417191	NT	Homo sapiens leucyl(cystinyl) aminopeptidase (LNPEP), mRNA
8486	18359	28624	2.33	1.0E-71	11417191	NT	Homo sapiens leucyl(cystinyl) aminopeptidase (LNPEP), mRNA
9547	19147		4.48	1.0E-71	AB011399.1	NT	Homo sapiens gene for AF-6, complete cds
401	10347	20173	1.15	9.0E-72	A1857635.1	EST_HUMAN	wk95g03.x1 NCI_CGAP_Lu19 Homo sapiens cDNA clone IMAGE:2423188 3' similar to TR:O86705 O86705 HYPOTHETICAL 38.6 KD PROTEIN ; contains Alu repetitive element;
401	10347	20174	1.15	9.0E-72	A1857635.1	EST_HUMAN	wk95g03.x1 NCI_CGAP_Lu19 Homo sapiens cDNA clone IMAGE:2423188 3' similar to TR:O86705 O86705 HYPOTHETICAL 38.6 KD PROTEIN ; contains Alu repetitive element;
4023	13926	23700	5.23	7.0E-72	4501866	NT	Homo sapiens aconitase 2, mitochondrial (ACO2), nuclear gene encoding mitochondrial protein, mRNA
4023	13926	23701	5.23	7.0E-72	4501866	NT	Homo sapiens aconitase 2, mitochondrial (ACO2), nuclear gene encoding mitochondrial protein, mRNA
4023	13926	23702	5.23	7.0E-72	4501866	NT	Homo sapiens aconitase 2, mitochondrial (ACO2), nuclear gene encoding mitochondrial protein, mRNA
6228	16094	26244	2.94	7.0E-72	S41694.1	NT	(pseudogene) PTMAP2=prothymosin alpha [human, Genomic, 1192 nt, segment 2 of 3]
6885	16784		3.72	6.0E-72	AL163246.2	NT	Homo sapiens chromosome 21 segment HS21C046
8788	18603	28893	2.22	6.0E-72	BF059578.1	EST_HUMAN	7k63a05.x1 NCI_CGAP_GC6 Homo sapiens cDNA clone IMAGE:3480080 3' similar to SW:KMLC_RABIT P07313 MYOSIN LIGHT CHAIN KINASE, SKELETAL MUSCLE ;
56	10043	19854	0.88	5.0E-72	BF333707.1	EST_HUMAN	QV0-CS0010-150900-398-e11 CS0010 Homo sapiens cDNA
56	10043	19855	0.88	5.0E-72	BF333707.1	EST_HUMAN	QV0-CS0010-150900-398-e11 CS0010 Homo sapiens cDNA
57	10043	19854	2.95	5.0E-72	BF333707.1	EST_HUMAN	QV0-CS0010-150900-398-e11 CS0010 Homo sapiens cDNA
57	10043	19855	2.95	5.0E-72	BF333707.1	EST_HUMAN	QV0-CS0010-150900-398-e11 CS0010 Homo sapiens cDNA
1122	11037		2.75	5.0E-72	L11645.1	NT	Homo sapiens alpha-tubulin mRNA, complete cds
6150	16023	26163	1.47	5.0E-72	AU128584.1	EST_HUMAN	AU128584 NT2RP2 Homo sapiens cDNA clone NT2RP2003751 5'
7097	16974	27167	3.55	5.0E-72	AW161274.1	EST_HUMAN	au80c03.y1 Schneider fetal brain 00004 Homo sapiens cDNA clone IMAGE:2782564 5' similar to TR:Q99785 Q99785 HYPOTHETICAL 32.4 KD PROTEIN ; contains element MSR1 repetitive element ;
8599	18437	28706	3.18	5.0E-72	BF331571.1	EST_HUMAN	MR4-BT0598-010600-005-005 BT0598 Homo sapiens cDNA
8599	18437	28707	3.18	5.0E-72	BF331571.1	EST_HUMAN	MR4-BT0598-010600-005-005 BT0598 Homo sapiens cDNA
9253	19700		2.43	5.0E-72	BE928645.1	EST_HUMAN	QV1-BT0632-280800-342-e10 BT0632 Homo sapiens cDNA



Page 272 of 413  
Table 4  
Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
4716	14602		1.06	4.0E-72	11034844	NT	Homo sapiens hypothetical protein dJ1057B20.2 (DJ1057B20.2), mRNA
6380	16242	26402	1.4	4.0E-72	5729867	NT	Homo sapiens hect domain and RLD 2 (HERC2), mRNA
7633	17484	27705	1.42	4.0E-72	8923869	NT	Homo sapiens hypothetical protein FLJ20788 (FLJ20788), mRNA
8815	18628	28917	7.32	4.0E-72	H79421.1	EST_HUMAN	yu28a03.r1 Soares fetal liver spleen 1NFLS Homo sapiens cDNA clone IMAGE:235084 5'
8929	18737	29030	2.76	4.0E-72	T81910.1	EST_HUMAN	yd29d09.s1 Soares fetal liver spleen 1NFLS Homo sapiens cDNA clone IMAGE:109649 3'
9603	19185	25249	4.2	4.0E-72	AJ277546.2	NT	Homo sapiens WEE1 gene for protein kinase and partial ZNF143 gene for zinc finger transcription factor
885	10811		4.88	3.0E-72	AA723823.1	EST_HUMAN	ah63a06.s1 Soares testis_NHT Homo sapiens cDNA clone 1310290 3'
1139	11053	20894	6.06	3.0E-72	U16306.1	NT	Human chondroitin sulfate proteoglycan versican V0 splice-variant precursor peptide mRNA, complete cds
1139	11053	20895	6.06	3.0E-72	U16306.1	NT	Human chondroitin sulfate proteoglycan versican V0 splice-variant precursor peptide mRNA, complete cds
3037	12965	22759	10.51	3.0E-72	AJ229043.1	NT	Homo sapiens 959 kb contig between AML1 and CBR1 on chromosome 21q22, segment 3/3
3241	13164	22963	2.63	3.0E-72	8923548	NT	Homo sapiens hypothetical protein FLJ20585 (FLJ20585), mRNA
3750	13663	23445	2.51	3.0E-72	S77589.1	NT	TCR V delta 2-C alpha = T-cell receptor delta and C alpha fusion gene (alternatively spliced, splice junction) [human, precursor B-cell line REH, mRNA Partial, 211 nt]
4445	14339	24129	3.22	3.0E-72	11416196	NT	Homo sapiens hypothetical protein (FLJ11127), mRNA
4835	14717	24500	0.94	3.0E-72	A1654337.1	EST_HUMAN	wb31a08.x1 NCI_CGAP_GC6 Homo sapiens cDNA clone IMAGE:2307254 3'
5639	15552	25643	2.4	3.0E-72	AF073367.1	NT	Homo sapiens growth factor receptor-bound protein 10 (GRB10) gene, exon 5
5639	15552	25644	2.4	3.0E-72	AF073367.1	NT	Homo sapiens growth factor receptor-bound protein 10 (GRB10) gene, exon 5
5743	15651	25758	4.35	3.0E-72	AB029004.1	NT	Homo sapiens mRNA for KIAA1081 protein, partial cds
5743	15651	25759	4.35	3.0E-72	AB029004.1	NT	Homo sapiens mRNA for KIAA1081 protein, partial cds
5988	15893	26016	3.02	3.0E-72	4828987	NT	Homo sapiens ribosomal protein L3-like (RPL3L) mRNA
6475	16334	26501	2.32	3.0E-72	U80017.1	NT	Homo sapiens basic transcription factor 2 p44 (btf2p44) gene, partial cds, neuronal apoptosis inhibitory protein (naip) and survival motor neuron protein (smn) genes, complete cds
6755	16634	26822	1.26	3.0E-72	5031892	NT	Homo sapiens nuclear receptor subfamily 1, group H, member 3 (NR1H3), mRNA
7960	17810	28051	1.3	3.0E-72	X98289.1	NT	Homo sapiens S100A12 gene for Calgranulin C, exon 2 and joined cds
9516	19129	25262	1.85	3.0E-72	AB011399.1	NT	Homo sapiens gene for AF-6, complete cds
8122	18010	28257	4.45	2.0E-72	AA789277.1	EST_HUMAN	aj28b09.s1 Soares testis_NHT Homo sapiens cDNA clone 1391609 3' similar to gb:X02067 H.sapiens mRNA for 7SL RNA pseudogene (HUMAN);
9600	19182	25246	3.74	2.0E-72	AF182714.1	NT	Rattus norvegicus putative phosphate/phosphoenolpyruvate translocator mRNA, complete cds
2030	11921	21812	2.61	1.0E-72	AA846225.1	EST_HUMAN	ai83d02.s1 Soares parathyroid_tumor_NbHPA Homo sapiens cDNA clone IMAGE:1387395 3'
5524	15441	25506	3.15	1.0E-72	7657676	NT	Homo sapiens vacuolar protein sorting 41 (yeast homolog) (VPS41), mRNA
5949	15854	25976	19.78	1.0E-72	11321578	NT	Homo sapiens myosin, heavy polypeptide 13, skeletal muscle (MYH13), mRNA

Page 273 of 413  
Table 4  
Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
5949	15854	25977	19.78	1.0E-72	11321578	NT	Homo sapiens myosin, heavy polypeptide 13, skeletal muscle (MYH13), mRNA
6501	16360	26533	3.82	1.0E-72	BE175434.1	EST_HUMAN	RC4-HT0578-170300-012-g02 HT0578 Homo sapiens cDNA
6501	16360	26534	3.82	1.0E-72	BE175434.1	EST_HUMAN	RC4-HT0578-170300-012-g02 HT0578 Homo sapiens cDNA
7532	17383	27594	6.06	1.0E-72	AF222742.1	NT	Homo sapiens synaptic glycoprotein SC2 (SC2) mRNA, complete cds
7532	17383	27595	6.06	1.0E-72	AF222742.1	NT	Homo sapiens synaptic glycoprotein SC2 (SC2) mRNA, complete cds
1443	11348	21213	1.23	9.0E-73	AW374988.1	EST_HUMAN	MRO-CT0063-071099-002-h11 CT0063 Homo sapiens cDNA
8320	18197		23.9	9.0E-73	11424099	NT	Homo sapiens ribosomal protein L13a (RPL13A), mRNA
1022	10939	20782	1.03	8.0E-73	AW071755.1	EST_HUMAN	ws55c06.x1 NCL_CGAP_Brn25 Homo sapiens cDNA clone IMAGE:1639743 3'
1399	11304	21163	3.06	8.0E-73	AI024877.1	EST_HUMAN	Q59050 HYPOTHETICAL PROTEIN MJ1656 ;
5959	15864	25986	4.6	8.0E-73	11428469	NT	Q39h08.x1 Scars_testis_NHT Homo sapiens cDNA clone IMAGE:1639743 3'
6715	16595	26785	2	8.0E-73	AF113129.1	NT	Homo sapiens lysozyme homolog (LOC57151), mRNA
							Homo sapiens vacuolar ATPase isoform VA68 mRNA, complete cds
7385	17254	27459	15.88	8.0E-73	BE019900.1	EST_HUMAN	bb62a06.y1 NIH_MGC_9 Homo sapiens cDNA clone IMAGE:3030034 5' similar to gb:X04098_cds1 ACTIN, CYTOPLASMIC 2 (HUMAN); gb:M21495 Mouse cytoskeletal gamma-actin mRNA, complete cds (MOUSE);
7614	17465	27682	2.22	8.0E-73	11528037	NT	Homo sapiens interleukin 12 receptor, beta 1 (IL12RB1), mRNA
7614	17465	27683	2.22	8.0E-73	11528037	NT	Homo sapiens interleukin 12 receptor, beta 1 (IL12RB1), mRNA
9446	19081	25282	2.12	8.0E-73	AB002059.1	NT	Homo sapiens DNA for Human P2XM, complete cds
9654	19217	25235	2.69	8.0E-73	11418189	NT	Homo sapiens thyroid autoantigen 70kD (Ku antigen) (G22P1), mRNA
1118	11033	20875	0.78	7.0E-73	8923290	NT	Homo sapiens hypothetical protein FLJ20309 (FLJ20309), mRNA
3261	13184	22983	1.06	7.0E-73	AL163206.2	NT	Homo sapiens chromosome 21 segment HS21C006
4863	14743		1.62	7.0E-73	AL163282.2	NT	Homo sapiens chromosome 21 segment HS21C082
152	10126		2.37	6.0E-73	AL163218.2	NT	Homo sapiens chromosome 21 segment HS21C018
6255	16121	26274	3.36	6.0E-73	BE166574.1	EST_HUMAN	QV0-HT0494-020300-137-d03 HT0494 Homo sapiens cDNA
5215	15138	24832	2.05	4.0E-73	11422159	NT	Homo sapiens HELG protein (FAM4A1), mRNA
1818	11715	21595	0.99	3.0E-73	11435913	NT	Homo sapiens heme-binding protein (HEBP), mRNA
1818	11715	21596	0.99	3.0E-73	11435913	NT	Homo sapiens heme-binding protein (HEBP), mRNA
833	10760	20610	1.75	2.0E-73	AF139897.1	NT	Homo sapiens BAS1 (BAS1) mRNA, partial cds
1902	11798		1.48	2.0E-73	AW898091.1	EST_HUMAN	RC3-NN0066-270400-011-c04 NN0066 Homo sapiens cDNA
2251	12135		1.1	2.0E-73	U01317.1	NT	Human beta globin region on chromosome 11
3144	13069	22869	3.48	2.0E-73	4502582	NT	Homo sapiens caspase 8, apoptosis-related cysteine protease (CASP8) mRNA
3503	13420	23221	0.96	2.0E-73	7669539	NT	Homo sapiens Parkinson disease (autosomal recessive, juvenile) 2, parkin (PARK2), transcript variant 3, mRNA

Page 274 of 413  
Table 4  
Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
3503	13420	23222	0.96	2.0E-73	769539	NT	Homo sapiens Parkinson disease (autosomal recessive, juvenile) 2, parkin (PARK2), transcript variant 3, mRNA
5902	15808	25933	7.6	2.0E-73	AB046811.1	NT	Homo sapiens mRNA for KIAA1591 protein, partial cds
6023	15927	26058	1.35	2.0E-73	11431471	NT	Homo sapiens interleukin 4 receptor (IL4R), mRNA
6023	15927	26059	1.35	2.0E-73	11431471	NT	Homo sapiens interleukin 4 receptor (IL4R), mRNA
7956	17806	28048	1.34	2.0E-73	4504168	NT	Homo sapiens glutathione synthetase (GSS) mRNA
7993	17843	28055	2.45	2.0E-73	11496980	NT	Homo sapiens supervillin (SVIL), transcript variant 1, mRNA
7993	17843	28056	2.45	2.0E-73	11496980	NT	Homo sapiens supervillin (SVIL), transcript variant 1, mRNA
8138	18026	28272	4.14	2.0E-73	11431598	NT	Homo sapiens KIAA1080 protein; Golgi-associated, gamma-actin binding protein 2 (KIAA1080), mRNA
8408	18284	28537	3.79	2.0E-73	4557612	NT	Homo sapiens galactosylceramidase (Krabbe disease) (GALC), mRNA
8408	18284	28538	3.79	2.0E-73	4557612	NT	Homo sapiens galactosylceramidase (Krabbe disease) (GALC), mRNA
8432	18306	28562	1.78	2.0E-73	AB028982.1	NT	Homo sapiens mRNA for KIAA1059 protein, partial cds
9447	11798		1.72	2.0E-73	AW89081.1	EST_HUMAN	RC3-NN0068-270400-011-004 NN0068 Homo sapiens cDNA
1743	11844	21512	1.57	1.0E-73	AU121585.1	EST_HUMAN	AU121585 MAMMA1 Homo sapiens cDNA clone MAMMA1000490 5'
2434	12311	22207	0.93	1.0E-73	AF198349.1	NT	Gallus gallus Dach2 protein (Dach2) mRNA, complete cds
7469	17329	27534	1.36	1.0E-73	A1147427.1	EST_HUMAN	qg61b07.r1 Soares_testis_NHT Homo sapiens cDNA clone IMAGE:1839637 5' similar to contains element MER22 repetitive element:
8747	17896	28140	2.67	1.0E-73	BE385477.1	EST_HUMAN	601276071F1 NIH_MGC_20 Homo sapiens cDNA clone IMAGE:3617105 5'
723	10655	20485	1.39	8.0E-74	4557428	NT	Homo sapiens CD39-like 4 (CD39L4) mRNA
5506	15521	25602	1.84	8.0E-74	S83194.1	NT	Ca2+/calmodulin-dependent protein kinase IV kinase isoform [rats, brain, mRNA, 3429 nt]
5506	15521	25603	1.84	8.0E-74	S83194.1	NT	Ca2+/calmodulin-dependent protein kinase IV kinase isoform [rats, brain, mRNA, 3429 nt]
1906	11801	21679	3.01	7.0E-74	AJ001689.1	NT	Homo sapiens NKG2D gene, exon 10
3286	13207	23007	0.99	7.0E-74	AL163246.2	NT	Homo sapiens chromosome 21 segment HS21C046
7327	17231	27432	2	7.0E-74	BE967432.1	EST_HUMAN	601649284F1 NIH_MGC_73 Homo sapiens cDNA clone IMAGE:3932997 5'
9553	19216	25234	2.81	7.0E-74	BE266305.1	EST_HUMAN	601191927F1 NIH_MGC_7 Homo sapiens cDNA clone IMAGE:3635855 5'
1106	11022	20865	2.58	6.0E-74	AF109907.1	NT	Homo sapiens S164 gene, partial cds; PS1 and hypothetical protein genes, complete cds; and S171 gene, partial cds
1609	11514	21373	1.03	6.0E-74	AW263177.1	EST_HUMAN	xn78g07.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2700636 3'
2268	12152	22050	9.96	6.0E-74	BE388280.1	EST_HUMAN	601283521F1 NIH_MGC_44 Homo sapiens cDNA clone IMAGE:3606453 5'
2268	12152	22051	9.96	6.0E-74	BE388280.1	EST_HUMAN	601283521F1 NIH_MGC_44 Homo sapiens cDNA clone IMAGE:3605453 5'
2834	12762	22553	1.39	6.0E-74	AW014039.1	EST_HUMAN	UI-H-B10-aah-h-03-0-UJ.s1 NC1 CGAP Sub1 Homo sapiens cDNA clone IMAGE:2709365 3'
2834	12762	22554	1.39	6.0E-74	AW014039.1	EST_HUMAN	UI-H-B10-aah-h-03-0-UJ.s1 NC1 CGAP Sub1 Homo sapiens cDNA clone IMAGE:2709365 3'
3652	13566	23352	2.63	6.0E-74	BE048846.1	EST_HUMAN	hn54e1.x1 NC1 CGAP Kid11 Homo sapiens cDNA clone IMAGE:3132332 3'

Page 275 of 413  
Table 4

Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
3652	13566	23363	2.63	6.0E-74	BE048846.1	EST_HUMAN	h54e11.x1 NCI_CGAP_Kid11 Homo sapiens cDNA clone IMAGE:3132332 3'
5294	15215	25016	2.49	6.0E-74	11056013	NT	Homo sapiens actin filament associated protein (AFAP), mRNA
887	10813	20661	2.58	5.0E-74	AW020986.1	EST_HUMAN	d17c09.y1 Morton Fetal Cochlea Homo sapiens cDNA clone IMAGE:2483704 5'
2669	12534		5.19	5.0E-74	AW362756.1	EST_HUMAN	PM0-CT0289-271099-001-h07 CT0289 Homo sapiens cDNA
5320	15240	25045	2.15	5.0E-74	11425417	NT	Homo sapiens phosphatidylinositol glycan, class L (PIGL), mRNA
5539	15456	25526	10.48	5.0E-74	X89670.1	NT	H. sapiens mRNA for TPCR16 protein
5563	15479	25552	6.74	5.0E-74	4507866	NT	Homo sapiens VAMP (vesicle-associated membrane protein)-associated protein A (33kD) (VAPA) mRNA, and translated products
5602	15516	25594	1.85	5.0E-74	11431471	NT	Homo sapiens interleukin 4 receptor (IL4R), mRNA
5602	15516	25595	1.85	5.0E-74	11431471	NT	Homo sapiens interleukin 4 receptor (IL4R), mRNA
6120	16014	26152	3.73	5.0E-74	7662263	NT	Homo sapiens KIAA0716 gene product (KIAA0716), mRNA
6684	16564	26758	2.69	5.0E-74	11345483	NT	Homo sapiens hypothetical protein FLJ13222 (FLJ13222), mRNA
8117	18006	28252	1.88	5.0E-74	Y09420.1	NT	H. sapiens mRNA for HIP-1
8117	18006	28253	1.88	5.0E-74	Y09420.1	NT	H. sapiens mRNA for HIP-1
278	10243	20063	1.89	4.0E-74	D87675.1	NT	Homo sapiens DNA for amyloid precursor protein, complete cds
834	10761	20611	4.95	4.0E-74	AB028942.1	NT	Homo sapiens mRNA for KIAA1019 protein, partial cds
1919	11814	21692	2.44	4.0E-74	AB026898.1	NT	Homo sapiens DNA, DLEC1 to ORCTL4 gene region, section 1/2 (DLEC1, ORCTL3, ORCTL4 genes, complete cds)
1919	11814	21693	2.44	4.0E-74	AB026898.1	NT	Homo sapiens DNA, DLEC1 to ORCTL4 gene region, section 1/2 (DLEC1, ORCTL3, ORCTL4 genes, complete cds)
2027	11918	21808	4.34	4.0E-74	4506192	NT	Homo sapiens proteasome (prosome, macropain) subunit, beta type, 1 (PSMB1) mRNA
2027	11918	21809	4.34	4.0E-74	4506192	NT	Homo sapiens proteasome (prosome, macropain) subunit, beta type, 1 (PSMB1) mRNA
2085	11975	21870	1.21	4.0E-74	AB032994.1	NT	Homo sapiens mRNA for KIAA1168 protein, partial cds
2377	12257	22149	0.99	4.0E-74	AJ006976.1	NT	Homo sapiens PLP gene
3052	12979	22772	4.44	4.0E-74	AJ006976.1	NT	Homo sapiens PLP gene
3483	13399	23204	0.93	4.0E-74	AL163210.2	NT	Homo sapiens chromosome 21 segment HS21C010
3973	13680	23655	1.31	4.0E-74	AL163247.2	NT	Homo sapiens chromosome 21 segment HS21C047
4457	14351	24142	1.57	4.0E-74	7662183	NT	Homo sapiens KIAA0569 gene product (KIAA0569), mRNA
4512	14405	24192	0.82	4.0E-74	Z17227.1	NT	Homo sapiens mRNA for transmembrane receptor protein
5006	14880	24644	3.76	4.0E-74	4504326	NT	Homo sapiens hydroxacyl-Coenzyme A dehydrogenase/3-keiloacyl-Coenzyme A thiolase/enoyl-Coenzyme A hydratase (trifunctional protein), beta subunit (HADHB) mRNA
5006	14880	24645	3.76	4.0E-74	4504326	NT	Homo sapiens hydroxacyl-Coenzyme A dehydrogenase/3-keiloacyl-Coenzyme A thiolase/enoyl-Coenzyme A hydratase (trifunctional protein), beta subunit (HADHB) mRNA
6977	16854		5.03	3.0E-74	AA300378.1	EST_HUMAN	EST13131 Thymus tumor III Homo sapiens cDNA 5' end similar to similar to ribosomal protein L37

Table 4

## Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
7394	17312	27519	2.42	3.0E-74	M78984.1	EST_HUMAN	EST01132 Subtracted Hippocampus, Stratagene (cat. #936205) Homo sapiens cDNA clone HHCPF91
7921	17771	28010	2.22	3.0E-74	AA601493.1	EST_HUMAN	no17g05.s1 NCI_CGAP_Phe1 Homo sapiens cDNA clone IMAGE:1100984 3'
942	10867	20714	126.24	2.0E-74	7669491	NT	Homo sapiens glyceraldehyde-3-phosphate dehydrogenase (GAPD), mRNA
942	10867	20715	126.24	2.0E-74	7669491	NT	Homo sapiens glyceraldehyde-3-phosphate dehydrogenase (GAPD), mRNA
1158	11071	20916	1.01	2.0E-74	AF020092.1	NT	Human endogenous retrovirus HERV-K-147D
1224	11132	20986	1.15	2.0E-74	AI950528.1	EST_HUMAN	wx51e07.x1 NCI_CGAP_Lu28 Homo sapiens cDNA clone IMAGE:2547204 3' similar to SW:GG95_HUMAN Q08379 GOLGIN-95; contains element MER22 repetitive element;
1577	11481	21340	2.94	2.0E-74	4885198	NT	Homo sapiens epidermal growth factor receptor (avian erythroblastic leukemia viral (v-erb-b) oncogene homolog) (EGFR) mRNA
1577	11481	21341	2.94	2.0E-74	4885198	NT	Homo sapiens epidermal growth factor receptor (avian erythroblastic leukemia viral (v-erb-b) oncogene homolog) (EGFR) mRNA
2558	12430	22323	1.09	2.0E-74	AI557280.1	EST_HUMAN	PT2.1_15_G11.r tumor2 Homo sapiens cDNA 3'
4937	14815	24582	1.95	2.0E-74	AL355092.1	NT	Novel human gene mapping to chromosome 22
4937	14815	24583	1.95	2.0E-74	AL355092.1	NT	Novel human gene mapping to chromosome 22
4942	14820	24588	1.89	2.0E-74	U02963.1	NT	Human platelet glycoprotein IIb mRNA, 3' end
5543	19446	25630	1.64	2.0E-74	BE711134.1	EST_HUMAN	RC6-HT0678-220500-011-C03 HT0678 Homo sapiens cDNA
5594	19448	25584	1.98	2.0E-74	11439587	NT	Homo sapiens PDZ-73 protein (PDZ-73/NY-CO-38), mRNA
5594	19448	25585	1.98	2.0E-74	11439587	NT	Homo sapiens PDZ-73 protein (PDZ-73/NY-CO-38), mRNA
5629	19448	25584	2.57	2.0E-74	11439587	NT	Homo sapiens PDZ-73 protein (PDZ-73/NY-CO-38), mRNA
5629	19448	25585	2.57	2.0E-74	11439587	NT	Homo sapiens PDZ-73 protein (PDZ-73/NY-CO-38), mRNA
6219	16085	26235	1.55	2.0E-74	BF030788.1	EST_HUMAN	601557524F1 NIH_MGC_58 Homo sapiens cDNA clone IMAGE:3827549 5'
6631	16511	26700	1.43	2.0E-74	AB037816.1	NT	Homo sapiens mRNA for KIAA1395 protein, partial cds
7398	17316	27523	6.54	2.0E-74	AL163204.2	NT	Homo sapiens chromosome 21 segment HS21C004
9387	19047		1.46	2.0E-74	AA196181.1	EST_HUMAN	zp98a06.s1 Stratagene muscle 937209 Homo sapiens cDNA clone IMAGE:628018 3'
9903	19390	25196	1.26	2.0E-74	BF666568.1	EST_HUMAN	602121428F1 NIH_MGC_56 Homo sapiens cDNA clone IMAGE:4278559 5'
47	10035	19841	0.97	1.0E-74	7657334	NT	Homo sapiens Misshapen/NIK-related kinase (MINK), mRNA
334	10293	20108	3.6	1.0E-74	AW816405.1	EST_HUMAN	QV4-ST0234-181199-037-05 ST0234 Homo sapiens cDNA
491	10434	20247	1.19	1.0E-74	8922829	NT	Homo sapiens hypothetical protein FLJ11026 (FLJ11026), mRNA
497	10439	20252	2.7	1.0E-74	X02344.1	NT	Homo sapiens beta 2 gene
586	10524	20331	1.35	1.0E-74	4508020	NT	Homo sapiens zinc finger protein 259 (ZNF259) mRNA
993	10906	20751	2.17	1.0E-74	AL163246.2	NT	Homo sapiens chromosome 21 segment HS21C046
2179	12066	21968	6.19	1.0E-74	AB002059.1	NT	Homo sapiens DNA for Human P2XM, complete cds
3100	13026	22822	5.96	1.0E-74	4758697	NT	Homo sapiens mannosidase, alpha, class 2A, member 1 (MAN2A1), mRNA

Page 277 of 413  
Table 4  
Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
3887	13798	23584	4.56	1.0E-74	AL163268.2	NT	Homo sapiens chromosome 21 segment HS21C068
3974	13881	23656	0.9	1.0E-74	BE083090.1	EST_HUMAN	RC2.BT0642-270300-019-06 BT0642 Homo sapiens cDNA
4170	14070	23845	0.9	1.0E-74	BE467769.1	EST_HUMAN	haz73h08.x1 NCI_CGAP_Lu24 Homo sapiens cDNA clone IMAGE:3213663 3' similar to WP:B0511.12
5112	14980	24794	1.19	1.0E-74	D83327.1	NT	CE17351;
6694	16574	26765	1.83	1.0E-74	BE549105.1	EST_HUMAN	Homo sapiens DCRR1 mRNA, partial cds
6694	16574	26766	1.83	1.0E-74	BE549105.1	EST_HUMAN	601070088F1 NIH_MGC_12 Homo sapiens cDNA clone IMAGE:3456260 5'
7112	16989	27182	3.92	1.0E-74	AF214562.1	NT	601070088F1 NIH_MGC_12 Homo sapiens cDNA clone IMAGE:3456260 5'
7988	17838	28079	1.31	1.0E-74	11420549	NT	Homo sapiens tracheal epithelium enriched protein (PLUNC) gene, complete cds
9024	18818	29108	1.6	1.0E-74	11417856	NT	Homo sapiens hypothetical protein FLJ10783 (FLJ10783), mRNA
9106	18873		2.83	1.0E-74	11417856	NT	Homo sapiens glutathione S-transferase theta 2 (GSTT2), mRNA
9249	12066	21968	4.14	1.0E-74	AB002059.1	NT	Homo sapiens glutathione S-transferase theta 2 (GSTT2), mRNA
9720	19261		1.36	1.0E-74	AF240786.1	NT	Homo sapiens DNA for Human P2XM, complete cds
2607	12475		4.07	8.0E-75	AF176228.1	NT	Homo sapiens glutathione S-transferase theta 2 (GSTT2) and glutathione S-transferase theta 1 (GSTT1) genes, complete cds
9406	19059		1.67	8.0E-75	AL163202.2	NT	Homo sapiens DNA cytosine-5 methyltransferase 3B (DNMT3B) mRNA, complete cds
2273	12157	22055	0.88	6.0E-75	AI817415.1	EST_HUMAN	Homo sapiens chromosome 21 segment HS21C002
5128	14995		0.86	6.0E-75	AA789285.1	EST_HUMAN	wk38a08.x1 NCI_CGAP_P122 Homo sapiens cDNA clone IMAGE:2417654 3' similar to gb:M14123_cds4
5102	14970	24746	1.04	5.0E-75	BE841305.1	EST_HUMAN	RETROVIRUS-RELATED POLYPROTEIN (HUMAN);
7395	17313	27520	1.22	5.0E-75	BF690254.1	EST_HUMAN	aj28c06.s1 Soares_testis_NHT Homo sapiens cDNA clone 1391626 3' similar to TR:Q15377 Q15377 Y-CHROMOSOME RNA RECOGNITION MOTIF PROTEIN ;
7876	17726	27969	3.1	5.0E-75	AI638623.1	EST_HUMAN	MRO-SN0040-080600-006-g06 SN0040 Homo sapiens cDNA
107	10088	19903	1.05	4.0E-75	BE081333.1	EST_HUMAN	602186616T1 NIH_MGC_49 Homo sapiens cDNA clone IMAGE:4298738 3'
451	10395		1.23	4.0E-75	N36757.1	EST_HUMAN	tt31c12.x1 NCI_CGAP_G06 Homo sapiens cDNA clone IMAGE:2242390 3' similar to TR:P97361 P97361
1728	11629	21498	1.5	4.0E-75	AW897230.1	EST_HUMAN	HYPOTHETICAL 20.1 KD PROTEIN ;
2818	12747	22540	4.65	4.0E-75	BE409494.1	EST_HUMAN	QV1-BT0632-210200-079-e02 BT0632 Homo sapiens cDNA
5792	15998	25806	4.29	4.0E-75	5579457	NT	y60h08.r1 Soares melanocyte 2N6HM Homo sapiens cDNA clone IMAGE:269055 5'
6052	15953	26084	1.56	4.0E-75	11417946	NT	CMO-NN0057-150400-335-a11 NN0057 Homo sapiens cDNA
6052	15953	26085	1.56	4.0E-75	11417946	NT	601303866F1 NIH_MGC_21 Homo sapiens cDNA clone IMAGE:3638344 5'
8072	17963	28214	8.72	4.0E-75	7669505	NT	Homo sapiens eukaryotic translation initiation factor 3, subunit 8 (10kD) (EIF3S8), mRNA
986	19099	20754	2.91	3.0E-75	AF157623.1	NT	Homo sapiens NIPSNAP, C. elegans, homolog 1 (NIPSNAP1), mRNA
987	19099	20754	2.25	3.0E-75	AF157623.1	NT	Homo sapiens NIPSNAP, C. elegans, homolog 1 (NIPSNAP1), mRNA
							Homo sapiens myosin, heavy polypeptide 1, skeletal muscle, adult (MYH1), mRNA
							Homo sapiens HTRA serine protease (PRSS11) gene, complete cds
							Homo sapiens HTRA serine protease (PRSS11) gene, complete cds

Table 4

## Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
1795	11693	21569	1.98	3.0E-75	AB011153.1	NT	Homo sapiens mRNA for KIAA0581 protein, partial cds
2065	11955	21852	1.05	3.0E-75	4507334	NT	Homo sapiens synaptotagmin 1 (SYNJ1), mRNA
2373	12253	22144	3.66	3.0E-75	4759153	NT	Homo sapiens synaptosomal-associated protein, 29kD (SNAP29) mRNA
2988	12916	22711	1.19	3.0E-75	AL163201.2	NT	Homo sapiens chromosome 21 segment HS21C001
3152	13077	22877	1.33	3.0E-75	AB011153.1	NT	Homo sapiens mRNA for KIAA0581 protein, partial cds
3306	13227	23030	1.01	3.0E-75	M72383.1	NT	Human calcium-dependent phospholipid-binding protein (PLA2) mRNA, complete cds
3306	13227	23031	1.01	3.0E-75	M72383.1	NT	Human calcium-dependent phospholipid-binding protein (PLA2) mRNA, complete cds
4077	13979	23759	1.42	3.0E-75	D87675.1	NT	Homo sapiens DNA for amyloid precursor protein, complete cds
4336	14233	24015	0.96	3.0E-75	7662421	NT	Homo sapiens KIAA0971 protein (KIAA0971), mRNA
6058	16041	26183	1.53	3.0E-75	11526319	NT	Homo sapiens HIR (histone cell cycle regulation defective, <i>S. cerevisiae</i> ) homolog A (HIRA), mRNA
6058	16041	26184	1.53	3.0E-75	11526319	NT	Homo sapiens HIR (histone cell cycle regulation defective, <i>S. cerevisiae</i> ) homolog A (HIRA), mRNA
6234	16100	26248	3.83	3.0E-75	7662209	NT	Homo sapiens KIAA0623 gene product (KIAA0623), mRNA
6234	16100	26249	3.83	3.0E-75	7662209	NT	Homo sapiens KIAA0623 gene product (KIAA0623), mRNA
6494	16353	26522	2.92	3.0E-75	4885632	NT	Homo sapiens Oncogene TIM (TIM) mRNA
6494	16353	26523	2.92	3.0E-75	4885632	NT	Homo sapiens Oncogene TIM (TIM) mRNA
7193	17070	27259	1.23	3.0E-75	11420804	NT	Homo sapiens snail 1 (drosophila homolog), zinc finger protein (SNAI1), mRNA
5490	15400		1.5	2.0E-75	AV734680.1	EST_HUMAN	AV734680 cDNA Homo sapiens cDNA clone IMAGE:1915898 3' similar to TR:Q69386 Q69386
7082	16959	27152	1.73	2.0E-75	AI311783.1	EST_HUMAN	gc91e02.x1 NCL_CGAP_Kid5 Homo sapiens cDNA clone IMAGE:2632707 3' similar to PTR7.11
2255	12139	22037	5.09	1.0E-75	AW168135.1	EST_HUMAN	POL/ENV GENE ;
2916	12843	22644	3.17	1.0E-75	X62221.1	NT	xg60d02.x1 NCL_CGAP_Uk4 Homo sapiens cDNA clone IMAGE:2632707 3' similar to contains PTR7.11
6903	16781		4.13	1.0E-75	AA399270.1	EST_HUMAN	PTR7 repetitive element ;
7423	17290	27498	3.73	1.0E-75	BF313645.1	EST_HUMAN	H.sapiens ERCC2 gene, exons 1 & 2 (partial)
7423	17290	27500	3.73	1.0E-75	BF313645.1	EST_HUMAN	z157n03.s1 Soares_testis_NHT Homo sapiens cDNA clone IMAGE:726485 3' similar to gb:M13932 40S
8257	18137		3.99	1.0E-75	AA664377.1	EST_HUMAN	RIBOSOMAL PROTEIN S17 (HUMAN);
8441	18315	28573	2.6	1.0E-75	AF223391.1	NT	601900294F1 NIH_MGC_19 Homo sapiens cDNA clone IMAGE:4129678 5'
9299	15100	24892	1.86	1.0E-75	BE894192.1	EST_HUMAN	601900294F1 NIH_MGC_19 Homo sapiens cDNA clone IMAGE:4129678 5'
38	10026	19825	1.45	9.0E-76	AI652648.1	EST_HUMAN	601900294F1 NIH_MGC_19 Homo sapiens cDNA clone IMAGE:868599 3'
							ac77b08.s1 Stratagene lung (#937210) Homo sapiens alpha1E subunit (CACNA1E) gene, exons 7-49, and partial cds, alternatively spliced
							Homo sapiens calcium channel alpha1E subunit (CACNA1E) gene, exons 7-49, and partial cds, alternatively spliced
							601437130F1 NIH_MGC_72 Homo sapiens cDNA clone IMAGE:3922303 5'
							wb30b10.x1 NCL_CGAP_GC6 Homo sapiens cDNA clone IMAGE:2307163 3' similar to TR:O75235 O75235
							TRAP1 ;



Page 279 of 413  
Table 4

Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
38	10026	19826	1.45	9.0E-76	AI652648.1	EST_HUMAN	wb30b10.x1 NCI_CGAP_GC6 Homo sapiens cDNA clone IMAGE:2307163 3' similar to TR:O75235 O75235 TRAP1;
2364	12244		1.16	9.0E-76	AA702415.1	EST_HUMAN	Z85b07.s1 Soares_fetal_liver_spleen_1NFLS_S1 Homo sapiens cDNA clone IMAGE:447541 3'
7697	17547	27770	23.8	9.0E-76	M12937.1	NT	Human ferritin Heavy subunit mRNA, complete cds
923	10848	20695	1.69	8.0E-76	4504374	NT	Homo sapiens H factor 1 (complement) (HF1) mRNA
923	10848	20696	1.69	8.0E-76	4504374	NT	Homo sapiens H factor 1 (complement) (HF1) mRNA
2880	12807	22603	1.06	8.0E-76	7706724	NT	Homo sapiens mediator (Sur2), mRNA
5744	15652	25760	5.38	8.0E-76	11421442	NT	Homo sapiens LIM domain kinase 1 (LIMK1), mRNA
6421	16282	26443	1.3	8.0E-76	11435215	NT	Homo sapiens serine/threonine kinase 2 (STK2), mRNA
8057	17948	28198	6.44	8.0E-76	10442821	NT	Homo sapiens baculoviral IAP repeat-containing 6 (BIRC6), mRNA
9336	19207		1.44	8.0E-76	11417862	NT	Homo sapiens calcineurin binding protein 1 (KIAA0330), mRNA
							Homo sapiens dihydropyrimidine dehydrogenase (E3 component of pyruvate dehydrogenase complex, 2-oxo-glutarate complex, branched chain keto acid dehydrogenase complex) (DLD) mRNA
759	10889	20527	4.12	7.0E-76	5016082	NT	Homo sapiens cAMP-specific phosphodiesterase 8A (PDE8A) mRNA, partial cds
3254	13177	22975	2.64	7.0E-76	AF056490.1	NT	Homo sapiens lymphocyte antigen 75 (LY75) mRNA, and translated products
3260	13183	22982	7.08	7.0E-76	4505052	NT	Homo sapiens core-binding factor, runt domain, alpha subunit 2; translocated to, 1; cyclin D-related (CBFA2T1) mRNA
3293	13215	23017	1.1	7.0E-76	4757915	NT	Homo sapiens septaplatin reductase (7,8-dihydrobiopterin:NADP+ oxidoreductase) (SPR) mRNA
4275	14174	23951	4.3	7.0E-76	4507184	NT	Homo sapiens septaplatin reductase (7,8-dihydrobiopterin:NADP+ oxidoreductase) (SPR) mRNA
4275	14174	23952	4.3	7.0E-76	4507184	NT	Homo sapiens septaplatin reductase (7,8-dihydrobiopterin:NADP+ oxidoreductase) (SPR) mRNA
1214	11122		19.65	6.0E-76	BE396253.1	EST_HUMAN	601312019F1 NIH_MGC_44 Homo sapiens cDNA clone IMAGE:3658757 5'
8761	17910	28154	2.69	6.0E-76	BE273201.1	EST_HUMAN	601142253F1 NIH_MGC_14 Homo sapiens cDNA clone IMAGE:3506029 5'
1899	11795	21673	3.69	5.0E-76	D63874.1	NT	Human mRNA for HMG-1, complete cds
1899	11795	21674	3.69	5.0E-76	D63874.1	NT	Human mRNA for HMG-1, complete cds
1899	11795	21675	3.69	5.0E-76	D63874.1	NT	Human mRNA for HMG-1, complete cds
7759	17609	27834	5.6	4.0E-76	D81625.1	EST_HUMAN	HUM178G01B Human fetal brain (T Fujiiwara) Homo sapiens cDNA clone GEN:178G01 5'
7759	17609	27835	5.6	4.0E-76	D81625.1	EST_HUMAN	HUM178G01B Human fetal brain (T Fujiiwara) Homo sapiens cDNA clone GEN:178G01 5'
613	10549	20359	1.78	3.0E-76	BF516262.1	EST_HUMAN	UIH-BW1-anz-b-04-0-UJ.s1 NCI CGAP Sub7 Homo sapiens cDNA clone IMAGE:3083862 3'
613	10549	20360	1.78	3.0E-76	BF516262.1	EST_HUMAN	UIH-BW1-anz-b-04-0-UJ.s1 NCI CGAP Sub7 Homo sapiens cDNA clone IMAGE:3083862 3'
1581	11485	21345	2.78	3.0E-76	4503476	NT	Homo sapiens eukaryotic translation elongation factor 1 beta 2 (EEF1B2) mRNA
1581	11485	21346	2.78	3.0E-76	4503476	NT	Homo sapiens eukaryotic translation elongation factor 1 beta 2 (EEF1B2) mRNA
3382	13300	23099	4.18	3.0E-76	BF375689.1	EST_HUMAN	RC5-ST0300-180100-033-A03 ST0300 Homo sapiens cDNA
3382	13300	23100	4.18	3.0E-76	BF375689.1	EST_HUMAN	RC5-ST0300-180100-033-A03 ST0300 Homo sapiens cDNA
5204	15084	29104	9.13	3.0E-76	Z41314.1	EST_HUMAN	HSCZQD042 normalized infant brain cDNA Homo sapiens cDNA clone c-zqd04 3'

Page 280 of 413  
Table 4

Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
5942	15748	25861	7.85	3.0E-76	AF286598.1	NT	Homo sapiens angiotensin binding protein 1 mRNA, complete cds
8737	16616	26806	1.92	3.0E-76	N42871.1	EST_HUMAN	y20g10.11 Soares melanocyte 2NbfHM Homo sapiens cDNA clone IMAGE:271842 5'
7602	17453	27687	3.2	3.0E-76	AW299353.1	EST_HUMAN	xs49h01.x1 NCI_CGAP_Kid11 Homo sapiens cDNA clone IMAGE:2773009 3'
7615	17466	27684	1.32	3.0E-76	AA442309.1	EST_HUMAN	z54d11.11 Soares_testis_NHT Homo sapiens cDNA clone IMAGE:757461 5'
7615	17466	27685	1.32	3.0E-76	AA442309.1	EST_HUMAN	z54d11.11 Soares_testis_NHT Homo sapiens cDNA clone IMAGE:757461 5'
9014	19337	25062	2.13	3.0E-76	AW967984.1	EST_HUMAN	EST380059 MAGE resequences, MAGJ Homo sapiens cDNA
9120	19745	24895	3.75	3.0E-76	AW956455.1	EST_HUMAN	EST368525 MAGE resequences, MAGJ Homo sapiens cDNA
280	10245	20065	1.22	2.0E-76	D84295.1	NT	Human mRNA for possible protein TPRDII, complete cds
339	10298	20112	3.66	2.0E-76	D84295.1	NT	Human mRNA for possible protein TPRDII, complete cds
339	10298	20113	3.66	2.0E-76	D84295.1	NT	Human mRNA for possible protein TPRDII, complete cds
453	10397		2.17	2.0E-76	4567662	NT	Homo sapiens immunoglobulin (CD79A) binding protein 1 (IGBP1) mRNA
575	10513	20320	1.07	2.0E-76	4503944	NT	Homo sapiens glucagon (GCG) mRNA
1014	10832	20778	1.03	2.0E-76	4758053	NT	Homo sapiens cAMP responsive element binding protein 1 (CREB1) mRNA
1518	11423	21281	1.53	2.0E-76	4504028	NT	Homo sapiens GM2 ganglioside activator protein (GM2A) mRNA
1518	11423	21282	1.53	2.0E-76	4504028	NT	Homo sapiens GM2 ganglioside activator protein (GM2A) mRNA
1886	11782	21688	1.43	2.0E-76	AA253954.1	EST_HUMAN	zs60h11.s1 Stratagene schizo brain S11 Homo sapiens cDNA clone IMAGE:701925 3'
2811	12740	22536	2.83	2.0E-76	P23266	SWISSPROT	OLFACTORY RECEPTOR-LIKE PROTEIN F5
3257	13180	22979	2.01	2.0E-76	AA445992.1	EST_HUMAN	zw64e02.s1 Soares_testis_NHT Homo sapiens cDNA clone IMAGE:780986 3' similar to SW:ITB5_HUMAN
3257	13180	22980	2.01	2.0E-76	AA445992.1	EST_HUMAN	P18084 INTEGRIN BETA-5 SUBUNIT PRECURSOR. ;
4043	10245	20065	0.94	2.0E-76	D84295.1	NT	zw64e02.s1 Soares_testis_NHT Homo sapiens cDNA clone IMAGE:780986 3' similar to SW:ITB5_HUMAN
4867	14747	24527	6.33	2.0E-76	AW879618.1	EST_HUMAN	P18084 INTEGRIN BETA-5 SUBUNIT PRECURSOR. ;
5068	14938	24710	1.25	2.0E-76	5031660	NT	Human mRNA for possible protein TPRDII, complete cds
5453	15374	25432	4.74	2.0E-76	AB029004.1	NT	QV3-OT0028-220300-132-b11 OT0028 Homo sapiens cDNA
6518	16377	26554	1.79	2.0E-76	11427410	NT	Homo sapiens EGF-like repeats and discoidin I-like domains 3 (EDIL3), mRNA
7898	17748	27988	3.28	2.0E-76	11437211	NT	Homo sapiens mRNA for KIAA1081 protein, partial cds
8293	18172	28416	2.76	2.0E-76	7549807	NT	Homo sapiens TPCR86 protein (HSTPCR86P), mRNA
4200	14100	23881	2.18	1.0E-76	D63874.1	NT	Homo sapiens similar to ribosomal protein S26 (H. sapiens) (LOC63150), mRNA
4200	14100	23882	2.18	1.0E-76	D63874.1	NT	Homo sapiens HIRA interacting protein 4 (dnaj-like) (HIRP4), mRNA
5345	15266	25093	5.29	1.0E-76	BE796537.1	EST_HUMAN	Human mRNA for HMG-1, complete cds
6137	15984	26119	3.98	9.0E-77	BE89525.1	EST_HUMAN	Human mRNA for HMG-1, complete cds
4421	14315	24101	1.65	8.0E-77	BF205181.1	EST_HUMAN	60159896F1 NIH_MGC_71 Homo sapiens cDNA clone IMAGE:3944302 5'
							601512435F1 NIH_MGC_71 Homo sapiens cDNA clone IMAGE:3913737 5'
							601866928F1 NIH_MGC_17 Homo sapiens cDNA clone IMAGE:4109503 5'

Table 4

## Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
5347	15268	25095	2.46	8.0E-77	4506230	NT	Homo sapiens proteasome (prosome, macropain) 26S subunit, non-ATPase, 7 (Mov34 homolog) (PSMD7) mRNA
8691	18578	28861	2.12	8.0E-77	AA019770.1	EST_HUMAN	ze62e02.r1 Soares retina N2b4HR Homo sapiens cDNA clone IMAGE:363578 5'
8691	18578	28862	2.12	8.0E-77	AA019770.1	EST_HUMAN	ze62e02.r1 Soares retina N2b4HR Homo sapiens cDNA clone IMAGE:363578 5'
9771	19289	25232	7.25	8.0E-77	R00245.1	EST_HUMAN	ye69f04.s1 Soares fetal liver spleen 1NFLS Homo sapiens cDNA clone IMAGE:123007 3' similar to contains MER10 repetitive element ;
1887	11783	21659	3.28	7.0E-77	AA625755.1	EST_HUMAN	zu91g01.s1 Soares testis_NHT Homo sapiens cDNA clone IMAGE:745392 3'
2360	12240	22136	2.1	7.0E-77	4505944	NT	Homo sapiens polymerase (RNA) II (DNA directed) polypeptide E (25kD) (POLR2E) mRNA
2360	12240	22137	2.1	7.0E-77	4505944	NT	Homo sapiens polymerase (RNA) II (DNA directed) polypeptide E (25kD) (POLR2E) mRNA
262	10227	20043	4.29	6.0E-77	4504600	NT	Homo sapiens interferon (alpha, beta and omega) receptor 2 (IFNAR2) mRNA
1125	11040	20882	0.9	6.0E-77	AW957753.1	EST_HUMAN	EST369823 MAGE resequences, MAGE Homo sapiens cDNA
1524	11429	21287	17.64	6.0E-77	AL204066.1	EST_HUMAN	qe77h12.x1 Soares fetal_lung_NbHL19W Homo sapiens cDNA clone IMAGE:1745063 3'
1216	11124	20973	1.78	5.0E-77	AF041015.1	NT	7 Homo sapiens glucokinase (GCK) gene, exon 2
1337	11243	21101	1.16	5.0E-77	4557250	NT	Homo sapiens disintegrin and metalloprotease domain 10 (ADAM10) mRNA
7336	12598	22492	0.97	5.0E-77	4503160	NT	Homo sapiens cullin 1 (CUL1) mRNA
4605	14493	24280	2.02	5.0E-77	5031660	NT	Homo sapiens EGF-like repeats and discoidin 1-like domains 3 (EDIL3), mRNA
4605	14493	24281	2.02	5.0E-77	5031660	NT	Homo sapiens EGF-like repeats and discoidin 1-like domains 3 (EDIL3), mRNA
4853	14733	24514	2.05	5.0E-77	AL043953.1	EST_HUMAN	DKFZp434G1728_r1 434 (synonym: hles3) Homo sapiens cDNA clone DKFZp434G1728 5'
6873	16752	26947	1.39	5.0E-77	11428849	NT	Homo sapiens 3-hydroxyisobutyryl-Coenzyme A hydrolase (HIBCH), mRNA
6873	16752	26948	1.39	5.0E-77	11428849	NT	Homo sapiens 3-hydroxyisobutyryl-Coenzyme A hydrolase (HIBCH), mRNA
7519	17338	27543	2.55	5.0E-77	11421928	NT	Homo sapiens sorting nexin 5 (SNX5), mRNA
7519	17338	27544	2.55	5.0E-77	11421928	NT	Homo sapiens sorting nexin 5 (SNX5), mRNA
7990	17840	28080	1.96	5.0E-77	AB002297.1	NT	Human mRNA for KIAA0299 gene, partial cds
7990	17840	28081	1.96	5.0E-77	AB002297.1	NT	Human mRNA for KIAA0299 gene, partial cds
1929	11824	21705	1.12	3.0E-77	5730038	NT	Homo sapiens SET domain and mariner transposase fusion gene (SETMAR) mRNA
1929	11824	21706	1.12	3.0E-77	5730038	NT	Homo sapiens SET domain and mariner transposase fusion gene (SETMAR) mRNA
8249	18129	28377	3.31	3.0E-77	BF359917.1	EST_HUMAN	PM3-MT0078-090800-005-g03 MT0078 Homo sapiens cDNA
1330	11237	21093	1.71	2.0E-77	AV764617.1	EST_HUMAN	AV764617 MDS Homo sapiens cDNA clone MDSBTF10 5'
1414	11320	21185	1.73	2.0E-77	AW997712.1	EST_HUMAN	RC3-BN0053-170200-011-h01 BN0053 Homo sapiens cDNA
2044	11935	21830	0.94	2.0E-77	L41825.1	NT	Homo sapiens CYP17 gene, 5' end
2056	11946	21842	2.64	2.0E-77	7706315	NT	Homo sapiens CGL-79 protein (LOC51634), mRNA
2549	12724	22312	2.02	2.0E-77	AB037836.1	NT	Homo sapiens mRNA for KIAA1415 protein, partial cds
2549	12724	22313	2.02	2.0E-77	AB037836.1	NT	Homo sapiens mRNA for KIAA1415 protein, partial cds

Table 4

## Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
3947	13855	23629	1.33	2.0E-77	BE044316.1	EST_HUMAN	h043b05.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:3040113 3' similar to SW:GAG2_HUMAN P10264 RETROVIRUS-RELATED GAG POLYPROTEIN ;
4315	14212	23995	0.89	2.0E-77	AI613519.1	EST_HUMAN	tw22g02.x1 NCL CGAP_Bm52 Homo sapiens cDNA clone IMAGE:2260466 3' similar to TR:O65245
4315	14212	23996	0.89	2.0E-77	AI613519.1	EST_HUMAN	tw22g02.x1 NCL CGAP_Bm52 Homo sapiens cDNA clone IMAGE:2260466 3' similar to TR:O65245
4492	14386		3.48	2.0E-77	4504068	NT	O65245 F21E10.7 PROTEIN ; Homo sapiens glutamic-oxaloacetic transaminase 2, mitochondrial (aspartate aminotransferase 2) (GOT2), nuclear gene encoding mitochondrial protein, mRNA
4659	14545	24334	3.58	2.0E-77	AA653025.1	EST_HUMAN	ns68g12.s1 NCL CGAP_P2 Homo sapiens cDNA clone IMAGE:1188838 similar to SW:RL29_HUMAN P47914 60S RIBOSOMAL PROTEIN L29, [1], contains element MSR1 repetitive element ;
5625	15540	25629	1.8	2.0E-77	BE298940.1	EST_HUMAN	601119552F1 NIH_MGC_17 Homo sapiens cDNA clone IMAGE:3029436 5'
5745	15653	25761	1.34	2.0E-77	BE787143.1	EST_HUMAN	601476802F1 NIH_MGC_68 Homo sapiens cDNA clone IMAGE:3879505 5'
6257	16123	26276	12.74	2.0E-77	AB333003.1	EST_HUMAN	at74a09.x1 Barstead colon HPLRB7 Homo sapiens cDNA clone IMAGE:3879505 5'
7489	17359	27564	4.99	2.0E-77	U50321.1	NT	Q13311 TAX1-BINDING PROTEIN TXBP151, [1];
7489	17359	27565	4.99	2.0E-77	U50321.1	NT	Human protein kinase C substrate 80K-H (PRKCSH) gene, exon 7
37	10024	19821	0.97	1.0E-77	AB033102.1	NT	Human protein kinase C substrate 80K-H (PRKCSH) gene, exon 7
37	10024	19822	0.97	1.0E-77	AB033102.1	NT	Homo sapiens mRNA for KIAA1276 protein, partial cds
271	10237	20054	1.87	1.0E-77	4502166	NT	Homo sapiens mRNA for KIAA1276 protein, partial cds
271	10237	20055	1.87	1.0E-77	4502166	NT	Homo sapiens amyloid beta (A4) precursor protein (protease nexin-II, Alzheimer disease) (APP), mRNA
857	12679	20635	4.95	1.0E-77	4502166	NT	Homo sapiens amyloid beta (A4) precursor protein (protease nexin-II, Alzheimer disease) (APP), mRNA
857	12679	20636	4.95	1.0E-77	4502166	NT	Homo sapiens amyloid beta (A4) precursor protein (protease nexin-II, Alzheimer disease) (APP), mRNA
2394	12272	22168	1.22	1.0E-77	AB029024.1	NT	Homo sapiens amyloid beta (A4) precursor protein (protease nexin-II, Alzheimer disease) (APP), mRNA
3007	12935	22727	2.82	1.0E-77	4503300	NT	Homo sapiens mRNA for KIAA1101 protein, complete cds
4256	14155	23930	2.99	1.0E-77	7708299	NT	Homo sapiens 2,4-dienoyl CoA reductase 1, mitochondrial (DECR1), mRNA
4423	14317	24103	14.73	1.0E-77	AJ229041.1	NT	Homo sapiens CGI-60 protein (LOC51626), mRNA
4552	14445	24229	1.95	1.0E-77	6552322	NT	Homo sapiens 959 kb contig between AML1 and CBR1 on chromosome 21q22; segment 1/3
5179	15043	24810	2.89	1.0E-77	AW755254.1	EST_HUMAN	Homo sapiens breast cancer 1, early onset (BRCA1), transcript variant BRCA1-exon4, mRNA CMYA5 Human cardiac muscle expression library Homo sapiens cDNA clone 4151935 similar to CMYA5 Cardiomyopathy associated gene 5

Table 4

## Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
5610	15525	25607	1.93	1.0E-77	AF086944.1	NT	Homo sapiens dynactin 1 (DCTN1) gene, exons 27 and 28
5610	15525	25608	1.93	1.0E-77	AF086944.1	NT	Homo sapiens dynactin 1 (DCTN1) gene, exons 27 and 28
5688	15597	25698	1.56	1.0E-77	M25844.1	NT	Human von Willebrand factor gene, exon 20
6197	15957	26089	11.39	1.0E-77	5881412	NT	Homo sapiens elastin (supravalvular aortic stenosis, Williams-Beuren syndrome) (ELN), mRNA
8002	17852	28093	1.22	1.0E-77	AB029396.1	NT	Homo sapiens hu-GlcAT-P mRNA for glucuronyltransferase, complete cds -
8002	17852	28094	1.22	1.0E-77	AB029396.1	NT	Homo sapiens hu-GlcAT-P mRNA for glucuronyltransferase, complete cds
8013	17893	28109	2.53	9.0E-78	AW753302.1	EST_HUMAN	RC3-CT0254-280699-011-b05 CT0254 Homo sapiens cDNA
5880	15786	25907	2.97	8.0E-78	AW947061.1	EST_HUMAN	RC2-ET0023-080500-012-e05 ET0023 Homo sapiens cDNA
5880	15786	25908	2.97	8.0E-78	AW947061.1	EST_HUMAN	RC2-ET0023-080500-012-e05 ET0023 Homo sapiens cDNA
80	10064	19881	1.83	6.0E-78	AU118789.1	EST_HUMAN	AU118789 HEMBA1 Homo sapiens cDNA clone HEMBA1004354 5'
80	10064	19882	1.83	6.0E-78	AU118789.1	EST_HUMAN	AU118789 HEMBA1 Homo sapiens cDNA clone HEMBA1004354 5'
5950	15855		2.51	6.0E-78	11432710	NT	Homo sapiens GDNF family receptor alpha 1 (GFRA1), mRNA
211	10182	19996	1.1	5.0E-78	11422486	NT	Homo sapiens hypothetical protein FLJ11316 (FLJ11316), mRNA
2515	12389	22281	4.1	5.0E-78	AW673424.1	EST_HUMAN	ba54h03.y3 NIH_MGC_10 Homo sapiens cDNA clone IMAGE:2900405 5' similar to WP:Y48B6A.6
3399	13259	23066	3.81	5.0E-78	M55586.1	NT	Human collagenase type IV (CLG4) gene, exon 6
5323	15243	25048	2.39	5.0E-78	AF038536.1	NT	Homo sapiens Best's macular dystrophy related protein mRNA, partial cds
5422	15343	25396	9.35	5.0E-78	11416585	NT	Homo sapiens transforming growth factor, beta-induced, 88kD (TGFB1), mRNA
6244	16110	26262	2.17	5.0E-78	AW953120.1	EST_HUMAN	EST365190 IMAGE resequences, MAGB Homo sapiens cDNA
7248	17125	27318	6.5	5.0E-78	U60899.1	NT	Human lysosomal alpha-mannosidase (manB) gene, exon 7
7249	17126	27319	3.75	5.0E-78	BE960836.1	EST_HUMAN	801648061F1 NIH_MGC_62 Homo sapiens cDNA clone IMAGE:3931887 5'
1502	11406	21265	1.6	4.0E-78	AL355841.1	NT	Novel human gene mapping to chromosome 22
1629	11533	21393	1.53	4.0E-78	A1985094.1	EST_HUMAN	wr97b12.x1 NCJ_CGAP_Kid11 Homo sapiens cDNA clone IMAGE:2495615 3' similar to SW:WAP_PIG
2270	12154	22053	2.21	4.0E-78	AF107405.1	NT	O46655 WHEY ACIDIC PROTEIN PRECURSOR ;
4227	14125	23899	1.39	4.0E-78	7656876	NT	Homo sapiens pre-mRNA splicing factor (SFRS3) mRNA, complete cds
4684	14560	24340	1.27	4.0E-78	4505806	NT	Homo sapiens syncytin (LOC30816), mRNA
4684	14560	24341	1.27	4.0E-78	4505806	NT	Homo sapiens phosphatidylinositol 4-kinase, catalytic, alpha polypeptide (PIK4CA) mRNA
7967	17817	28058	1.94	4.0E-78	11560151	NT	Homo sapiens phosphatidylinositol 4-kinase, catalytic, alpha polypeptide (PIK4CA) mRNA
7967	17817	28059	1.94	4.0E-78	11560151	NT	Homo sapiens hypothetical C2H2 zinc finger protein FLJ22504 (FLJ22504), mRNA
8721	18538	28822	1.97	4.0E-78	AF169148.1	NT	Homo sapiens hypothetical C2H2 zinc finger protein FLJ22504 (FLJ22504), mRNA
8844	18656	28944	3	4.0E-78	X05844.1	NT	Homo sapiens s-CaBP1 (CABP1) mRNA, complete cds
9664	19224	25239	2.85	4.0E-78	AB011399.1	NT	Human transforming growth factor-beta precursor gene exons 4-5 (and joined mature peptide)
155	10129	19944	1.6	3.0E-78	AF095901.1	NT	Homo sapiens gene for AF-6, complete cds
						NT	Homo sapiens eRF1 gene, complete cds

Page 284 of 413  
Table 4

Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
155	10129	19945	1.6	3.0E-78	AF095901.1	NT	Homo sapiens eRF1 gene, complete cds
3178	13103	22908	0.91	3.0E-78	4507164	NT	Homo sapiens nuclear antigen Sp100 (SP100) mRNA
4015	13657	23439	0.93	3.0E-78	4507334	NT	Homo sapiens synaptotagmin 1 (SYNJ1), mRNA
7902	17752		5.56	3.0E-78	BE144758.1	EST_HUMAN	CMO-HT0180-041099-065-c07 HT0180 Homo sapiens cDNA
8349	18226	28478	5.52	3.0E-78	BE156318.1	EST_HUMAN	QV0-HT0367-150200-114-g09 HT0367 Homo sapiens cDNA
3083	13010		2.22	2.0E-78	U04489.1	NT	Homo sapiens type IV collagen alpha 5 chain (COL4A5) gene, exon 20
3932	13841		1.68	2.0E-78	AA311872.1	EST_HUMAN	EST182583 Jurkat T-cells VI Homo sapiens cDNA 5' end
6412	16274	26435	1.46	2.0E-78	AW402306.1	EST_HUMAN	UI-HF-BK0-eaj-g-10-0-JL1 NIH_MGC_36 Homo sapiens cDNA clone IMAGE:3054139 5'
6412	16274	26436	1.46	2.0E-78	AW402306.1	EST_HUMAN	UI-HF-BK0-eaj-g-10-0-JL1 NIH_MGC_36 Homo sapiens cDNA clone IMAGE:3054139 5'
6547	16405	26584	3.88	2.0E-78	BF689800.1	EST_HUMAN	602186529F1 NIH_MGC_49 Homo sapiens cDNA clone IMAGE:4298599 5'
6687	16567	26761	2.73	2.0E-78	AV714177.1	EST_HUMAN	AV714177 DCB Homo sapiens cDNA clone DCBAWF09 5'
6921	16799	26991	1.84	2.0E-78	AI557509.1	EST_HUMAN	P12.1_16_B07.r tumor2 Homo sapiens cDNA 3'
6921	16799	26992	1.84	2.0E-78	AI557509.1	EST_HUMAN	P12.1_16_B07.r tumor2 Homo sapiens cDNA 3'
8429	18303	28559	4.5	2.0E-78	AI197837.1	EST_HUMAN	qi50h05.x1 NCL_CGAP_Brn25 Homo sapiens cDNA clone IMAGE:1859361 3' similar to WP.R90.1
8467	18340	28605	3.28	2.0E-78	N66951.1	EST_HUMAN	CE06325 PROTEIN KINASE ;
5247	15170	24943	2.9	1.0E-78	11417304	NT	za48f12.s1 Soares fetal liver spleen 1NFLS Homo sapiens cDNA clone IMAGE:295823 3'
6743	16622		1.68	1.0E-78	U52373.1	NT	Homo sapiens GAP-like protein (LOC51306), mRNA
9189	18924	25350	5.14	1.0E-78	11430460	NT	Homo sapiens GAP-like protein (LOC51306), mRNA
9284	18986	25327	1.26	1.0E-78	11435903	NT	Homo sapiens low density lipoprotein-related protein 2 (LRP2), mRNA
4600	14488	24274	4.48	9.0E-79	11525891	NT	Homo sapiens similar to lymphocyte activation-associated protein (H. sapiens) (LOC63140), mRNA
4758	14643	24431	2.48	9.0E-79	BE000837.1	EST_HUMAN	Homo sapiens peptide YY (PYY), mRNA
5335	15255	25078	12.03	9.0E-79	AB028070.1	NT	RC2-BN0074-090300-014-c12 BN0074 Homo sapiens cDNA
5827	15733	25844	2.18	9.0E-79	5454145	NT	Homo sapiens mRNA for activator of S phase Kinase, complete cds
7243	17120	27315	4.99	9.0E-79	J02853.1	NT	Homo sapiens ubiquitin-conjugating enzyme E2E 3 (homologous to yeast UBC4/5) (UBE2E3) mRNA
7243	17120	27316	4.99	9.0E-79	J02853.1	NT	Homo sapiens casein kinase II alpha subunit mRNA, complete cds
7953	17803	28042	1.31	9.0E-79	AF062346.1	NT	Homo sapiens casein kinase II alpha subunit mRNA, complete cds
7953	17803	28043	1.31	9.0E-79	AF062346.1	NT	Homo sapiens zinc finger protein 216 splice variant 1 (ZNF216) mRNA, complete cds
8419	18293	28547	1.82	9.0E-79	AY008273.1	NT	Homo sapiens zinc finger protein 216 splice variant 1 (ZNF216) mRNA, complete cds
8802	18616	28906	2.82	9.0E-79	11423827	NT	Homo sapiens TRAF6-regulated IKK activator 1 (ZNF216) mRNA, complete cds
8802	18616	28907	2.82	9.0E-79	11423827	NT	Homo sapiens suppressor of white apricot homolog 2 (SWAP2), mRNA
9854	19347	25213	1.49	9.0E-79	11417877	NT	Homo sapiens suppressor of white apricot homolog 2 (SWAP2), mRNA
							Homo sapiens gamma-glutamyltransferase 1 (GGT1), mRNA

Page 285 of 413  
Table 4  
Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
3682	13596	23382	1.2	8.0E-79	AL163210.2	NT	Homo sapiens chromosome 21 segment HS21C010
4391	14287	24069	0.94	8.0E-79	D28476.1	NT	Human mRNA for KIAA0045 gene, complete cds
4391	14287	24070	0.94	8.0E-79	D28476.1	NT	Human mRNA for KIAA0045 gene, complete cds
9107	15097	24899	1.4	8.0E-79	8567387	NT	Homo sapiens period (Drosophila) homolog 3 (PER3), mRNA
3214	13138	22941	6.85	7.0E-79	BE619648.1	EST_HUMAN	601472766T1 NIH_MGC_68 Homo sapiens cDNA clone IMAGE:3875657 3'
9040	18827		1.29	6.0E-79	AA699829.1	EST_HUMAN	z94e04.s1 Soares_fetal_liver_spleen_1NFLS_S1 Homo sapiens cDNA clone IMAGE:462558 3' similar to
8786	18601	28891	4.15	5.0E-79	AL163282.2	NT	TR:Q15408 Q15408 NEUTRAL PROTEASE LARGE SUBUNIT ;
3139	13064		1.12	4.0E-79	8922325	NT	Homo sapiens chromosome 21 segment HS21C082
4946	14823	24590	1.33	4.0E-79	BF210869.1	EST_HUMAN	Homo sapiens hypothetical protein FLJ10283 (FLJ10283), mRNA
310	10272	20091	1.4	3.0E-79	AF114488.1	NT	601874522F1 NIH_MGC_54 Homo sapiens cDNA clone IMAGE:4101245 5'
962	10885	20733	2.68	3.0E-79	AF232708.1	NT	Homo sapiens intersecin short isoform (ITSN) mRNA, complete cds
3060	12987	22778	1.36	3.0E-79	U09410.1	NT	Homo sapiens cell-line tsA201a chloride ion current inducer protein (Cln) gene, complete cds
5291	15212	25012	4.52	3.0E-79	AF110322.1	NT	Human zinc finger protein ZNF131 mRNA, partial cds
5506	15424	25486	1.71	3.0E-79	AB020699.1	NT	Homo sapiens MSTP016 (MST016) mRNA, complete cds
5525	15442	25507	3.47	3.0E-79	11426770	NT	Homo sapiens netrin 1 (NTN1), mRNA
5525	15442	25508	3.47	3.0E-79	11426770	NT	Homo sapiens netrin 1 (NTN1), mRNA
6200	15960	26091	3.28	3.0E-79	AB014520.1	NT	Homo sapiens mRNA for KIAA0620 protein, partial cds
6200	15960	26092	3.28	3.0E-79	AB014520.1	NT	Homo sapiens mRNA for KIAA0620 protein, partial cds
618	10555	20367	1.05	2.0E-79	BE379926.1	EST_HUMAN	601169415F2 NIH_MGC_53 Homo sapiens cDNA clone IMAGE:3511107 5'
912	10536	20685	1.14	2.0E-79	4757841	NT	Homo sapiens BCL2-like 2 (BCL2L2) mRNA
1019	10937		1.43	2.0E-79	AI523747.1	EST_HUMAN	th18h07.x1 NCL_CGAP_Pr28 Homo sapiens cDNA clone IMAGE:2118685 3'
2101	11990	21888	14.14	2.0E-79	4585963	NT	Homo sapiens phosphodiesterase 6A, cGMP-specific, rod, alpha (PDE6A), mRNA
2101	11990	21889	14.14	2.0E-79	4585963	NT	Homo sapiens phosphodiesterase 6A, cGMP-specific, rod, alpha (PDE6A), mRNA
2146	12034	21931	0.99	2.0E-79	AJ271408.1	NT	Homo sapiens mRNA for Fas-associated factor, FAF1 (FAF1 gene)
2265	12149	22049	1.54	2.0E-79	AF244138.1	NT	Homo sapiens hepatocellular carcinoma-associated antigen 88 (HCA88) mRNA, complete cds
3838	13749	23542	0.86	2.0E-79	AF170492.1	NT	Homo sapiens chloride channel CLC4 (CLC4) mRNA, complete cds
4074	13976	23755	1.17	2.0E-79	AJ271408.1	NT	Homo sapiens mRNA for Fas-associated factor, FAF1 (FAF1 gene)
4590	14478	24265	0.96	2.0E-79	AL163206.2	NT	Homo sapiens chromosome 21 segment HS21C006
6251	16117	26270	1.83	2.0E-79	7382479	NT	Homo sapiens Rho GTPase activating protein 6 (ARHGAP6), transcript variant 4, mRNA
6251	16117	26271	1.83	2.0E-79	7382479	NT	Homo sapiens Rho GTPase activating protein 6 (ARHGAP6), transcript variant 4, mRNA
6966	16834	27029	2.6	2.0E-79	11427428	NT	Homo sapiens hypothetical protein FLJ11006 (FLJ11006), mRNA
7808	17658	27896	1.44	2.0E-79	S72869.1	NT	H4(D10S170)=putative cytoskeletal protein [human, thyroid, mRNA, 3011 nt]
7808	17658	27897	1.44	2.0E-79	S72869.1	NT	H4(D10S170)=putative cytoskeletal protein [human, thyroid, mRNA, 3011 nt]



Table 4

## Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
8391	18267	28516	4.22	2.0E-79	BE064386.1	EST_HUMAN	RC4-BT0310-110300-015-f10 BT0310 Homo sapiens cDNA
8391	18267	28517	4.22	2.0E-79	BE064386.1	EST_HUMAN	RC4-BT0310-110300-015-f10 BT0310 Homo sapiens cDNA
9078	15096	24888	2.6	2.0E-79	7662357	NT	Homo sapiens KIAA0879 protein (KIAA0879), mRNA
9161	18907	25341	4.23	2.0E-79	AB020640.1	NT	Homo sapiens mRNA for KIAA0833 protein, partial cds
9391	19050	25307	1.96	2.0E-79	11418322	NT	Homo sapiens cadherin EGF LAG seven-pass G-type receptor 1 (CELSR1), mRNA
5971	19436		2.78	1.0E-79	BF363071.1	EST_HUMAN	MR0-NN0087-260600-017-b10 NN0087 Homo sapiens cDNA
8894	18704	28998	2.74	1.0E-79	BF087405.1	EST_HUMAN	QV2-H10540-120900-395-a05 HT0540 Homo sapiens cDNA
3107	13033	22828	3.79	9.0E-80	AA725848.1	EST_HUMAN	ai23e05.s1 Soares_testis_NHT Homo sapiens cDNA clone 1343648 3'
3107	13033	22829	3.79	9.0E-80	AA725848.1	EST_HUMAN	ai23e05.s1 Soares_testis_NHT Homo sapiens cDNA clone 1343648 3'
7751	17601	27824	1.28	9.0E-80	BE798603.1	EST_HUMAN	601581652F1 NIH_MGC_7 Homo sapiens cDNA clone IMAGE:3936061 5'
8597	18464	28735	11.05	9.0E-80	11433924	NT	Homo sapiens solute carrier family 7 (cationic amino acid transporter, y <sup>+</sup> system), member 8 (SLC7A8), mRNA
8597	18464	28736	11.05	9.0E-80	11433924	NT	Homo sapiens solute carrier family 7 (cationic amino acid transporter, y <sup>+</sup> system), member 8 (SLC7A8), mRNA
3551	13466		0.95	8.0E-80	U94387.1	NT	Homo sapiens Y chromosome spermatogenesis candidate protein (RBM) pseudogene mRNA, partial cds
6485	16343	28512	2.83	8.0E-80	11422647	NT	Homo sapiens KIAA0724 gene product (KIAA0724), mRNA
6485	16343	28513	2.83	8.0E-80	11422647	NT	Homo sapiens KIAA0724 gene product (KIAA0724), mRNA
7409	17276	27482	1.19	8.0E-80	6005921	NT	Homo sapiens triple functional domain (PTPRF interacting) (TRIO), mRNA
7409	17276	27483	1.19	8.0E-80	6005921	NT	Homo sapiens triple functional domain (PTPRF interacting) (TRIO), mRNA
882	10808	20657	2.34	6.0E-80	AI422197.1	EST_HUMAN	tf58d02.x1 NCI_CGAP_Brn23 Homo sapiens cDNA clone IMAGE:2103459 3' similar to SW:NUEM_HUMAN Q16795 NADH-UBIQUINONE OXIDOREDUCTASE 39 KD SUBUNIT PRECURSOR ;
1624	11528	21386	2.05	6.0E-80	U64898.1	NT	Homo sapiens NRD convertase mRNA, complete cds
4188	14088	23865	1.09	6.0E-80	AB032981.1	NT	Homo sapiens mRNA for KIAA1155 protein, partial cds
4188	14088	23866	1.09	6.0E-80	AB032981.1	NT	Homo sapiens mRNA for KIAA1155 protein, partial cds
5545	15461	25532	4.01	6.0E-80	11421462	NT	Homo sapiens malate dehydrogenase 2, NAD (mitochondrial) (MDH2), mRNA
5702	15610	25712	2.56	6.0E-80	AJ404468.1	NT	Homo sapiens mRNA for dynein heavy chain (DNAH9 gene)
5776	15683	25791	3.84	6.0E-80	11436736	NT	Homo sapiens tubby like protein 3 (TULP3), mRNA
7123	17000	27191	3.07	6.0E-80	11526464	NT	Homo sapiens G protein-coupled receptor 51 (GPR51), mRNA
7123	17000	27192	3.07	6.0E-80	11526464	NT	Homo sapiens G protein-coupled receptor 51 (GPR51), mRNA
7214	17091	27281	1.74	6.0E-80	AL163301.2	NT	Homo sapiens chromosome 21 segment HS21C101
7672	17522	27748	1.68	6.0E-80	U20211.1	NT	Human cone photoreceptor cGMP-phosphodiesterase alpha' subunit gene, exon 21
8311	18188	28437	2.91	6.0E-80	11427366	NT	Homo sapiens brefeldin A-inhibited guanine nucleotide-exchange protein 1 (BIG1), mRNA

Page 287 of 413  
Table 4

Single Exon Probes Expressed in Heart

Probe SEQ ID NO.	Exon SEQ ID NO.	ORF SEQ ID NO.	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
8555	18425	28694	50.71	6.0E-80	AF226730.1	NT	Homo sapiens Cy19 mRNA, complete cds
9047	10808	20657	1.98	6.0E-80	AI422197.1	EST_HUMAN	tf58d02.x1 NCI_CGAP_Brm23 Homo sapiens cDNA clone IMAGE:2103459 3' similar to SW:NUEM_HUMAN Q16795 NADH-UBIQUINONE OXIDOREDUCTASE 39 KD SUBUNIT PRECURSOR ;
9172	19562		1.62	6.0E-80	AF240786.1	NT	Homo sapiens glutathione S-transferase theta 2 (GSTT2) and glutathione S-transferase theta 1 (GSTT1) genes, complete cds
9371	19037		4.55	6.0E-80	AB029900.1	NT	Homo sapiens CST gene for cerebroside sulfoltransferase, exon 1, 2, 3, 4, 5
9847	19686		2.25	6.0E-80	AJ133127.1	NT	Homo sapiens mRNA for sodium-glucose cotransporter (SGLT2 gene)
573	10511	20319	1.11	5.0E-80	4506228	NT	Homo sapiens proteasome (prosome, macropain) 26S subunit, non-ATPase, 3 (PSMD3) mRNA
817	10745	20592	1.26	5.0E-80	AF108830.1	NT	Homo sapiens serine-threonine protein kinase (MNBH) mRNA, complete cds
817	10745	20593	1.26	5.0E-80	AF108830.1	NT	Homo sapiens serine-threonine protein kinase (MNBH) mRNA, complete cds
1172	11084		4.77	5.0E-80	X91647.1	NT	H. sapiens ncx1 gene (exon 12)
1440	11345		2.28	5.0E-80	AL163283.2	NT	Homo sapiens chromosome 21 segment HS21C083
2311	12192	22091	0.92	5.0E-80	U89358.1	NT	Human (3)mbt protein homolog mRNA, complete cds
2380	12260	22152	3.98	5.0E-80	AB037855.1	NT	Homo sapiens mRNA for KIAA1434 protein, partial cds
2764	12626	22518	1.13	5.0E-80	4504292	NT	Homo sapiens H3 histone family, member J (H3FJ) mRNA
3953	13861	23636	1.07	5.0E-80	AB019038.1	NT	Homo sapiens HMT-1 mRNA for beta-1,4 mannosyltransferase, complete cds
3953	13861	23637	1.07	5.0E-80	AB019038.1	NT	Homo sapiens HMT-1 mRNA for beta-1,4 mannosyltransferase, complete cds
4872	14762	24531	1.74	5.0E-80	AL163268.2	NT	Homo sapiens chromosome 21 segment HS21C068
6866	16745	26538	1.48	5.0E-80	9910293	NT	Mus musculus keratin complex 2, gene 6g (Krt2-6g), mRNA
7333	17237	27441	7.48	4.0E-80	F25915.1	EST_HUMAN	HSPD13155 HM3 Homo sapiens cDNA clone s4000045F03
210	10181		4.71	3.0E-80	AL163210.2	NT	Homo sapiens chromosome 21 segment HS21C010
4610	14498	24287	1.43	3.0E-80	BF085009.1	EST_HUMAN	PM0-GN0018-040900-002-E03 GN0018 Homo sapiens cDNA
4818	14701		4.97	3.0E-80	BE817465.1	EST_HUMAN	QV4-BN0263-040600-241-g10 BN0263 Homo sapiens cDNA
5554	15470	25541	2.05	3.0E-80	AI091675.1	EST_HUMAN	co23e12.x1 Soares NSF_F8_9W_OT_PA_S1 Homo sapiens cDNA clone IMAGE:1567054 3' similar to TR:O35790 O35790 PIG-L ;
1757	11656	21527	6.39	2.0E-80	R35321.1	EST_HUMAN	yg65a08.r1 Soares infant brain 1N1B Homo sapiens cDNA clone IMAGE:38060 5'
1816	11713	21593	1.91	2.0E-80	AI444821.1	EST_HUMAN	RET4B7 subtracted retina cDNA library Homo sapiens cDNA clone RET4B7
2009	11901	21791	6.6	2.0E-80	AL043116.2	EST_HUMAN	DKFZp434D1323_r1 434 (synonym: hfes3) Homo sapiens cDNA clone DKFZp434D1323 5'
6132	13979	26115	1.58	2.0E-80	11421930	NT	Homo sapiens Golgi transport complex protein (90 kDa) (GT090), mRNA
8243	18123	28373	3.06	2.0E-80	AA393362.1	EST_HUMAN	zt70f12.r1 Soares testis_NHT Homo sapiens cDNA clone IMAGE:727727 5' similar to TR:G191315 G191315 ANDROGEN-DEPENDENT EXPRESSED PROTEIN ;
337	10296		1.82	1.0E-80	AL163303.2	NT	Homo sapiens chromosome 21 segment HS21C103
782	10712	20551	1.12	1.0E-80	AF231920.1	NT	Homo sapiens chromosome 21 unknown mRNA

Page 288 of 413  
Table 4  
Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
1911	11806		3.13	1.0E-80	A1732656.1	EST_HUMAN	nm01f12.x5 NCL_CGAP_Co8 Homo sapiens cDNA clone IMAGE:1076495 3' similar to contains OFR.t1 OFR
4358	14264	24039	0.96	1.0E-80	AF077188.1	NT	repetitive element:
5192	15055	24819	0.97	1.0E-80	AL183278.2	NT	Homo sapiens cullin 4A (CUL4A) mRNA, complete cds
5265	15187		5.63	1.0E-80	BE386615.1	EST_HUMAN	Homo sapiens chromosome 21 segment HS21C078
5333	15647	25635	6.41	1.0E-80	L10347.1	NT	601274305F1 NIH_MGC 20 Homo sapiens cDNA clone IMAGE:3615433 5'
							Human pro-alpha1 type II collagen (COL2A1) gene exons 1-54, complete cds
							Homo sapiens malate dehydrogenase 2, NAD (mitochondrial) (MDH2), nuclear gene encoding mitochondrial protein, mRNA
5916	15822	25947	1.6	1.0E-80	5174540	NT	
6470	16329	26496	2.68	1.0E-80	A1948731.1	EST_HUMAN	wq25c05.x1 NCL_CGAP_Kid11 Homo sapiens cDNA clone IMAGE:2472296 3'
6470	16329	26497	2.68	1.0E-80	A1948731.1	EST_HUMAN	wq25c05.x1 NCL_CGAP_Kid11 Homo sapiens cDNA clone IMAGE:2472296 3'
7350	17218	27417	1.23	1.0E-80	AF245219.1	NT	Homo sapiens probable mannose binding C-type lectin DC-SIGNR mRNA, complete cds
7350	17218	27418	1.23	1.0E-80	AF245219.1	NT	Homo sapiens probable mannose binding C-type lectin DC-SIGNR mRNA, complete cds
7957	17807	28049	1.19	1.0E-80	D63479.2	NT	Homo sapiens mRNA for KIAA0145 protein, partial cds
8044	17935	28183	7.42	1.0E-80	11641276	NT	Homo sapiens similar to rat myomegalin (LOC64182), mRNA
8044	17935	28184	7.42	1.0E-80	11641276	NT	Homo sapiens similar to rat myomegalin (LOC64182), mRNA
9443	19079	25281	1.45	1.0E-80	11417901	NT	Homo sapiens meningioma (disrupted in balanced translocation) 1 (MN1), mRNA
9643	19211	25258	1.86	1.0E-80	AB020640.1	NT	Homo sapiens mRNA for KIAA0833 protein, partial cds
9670	19229		1.99	1.0E-80	AB011399.1	NT	Homo sapiens gene for AF-6, complete cds
8071	17962	28212	2.33	8.0E-81	A1251752.1	EST_HUMAN	qh90g05.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:1854296 3'
8071	17962	28213	2.33	8.0E-81	A1251752.1	EST_HUMAN	qh90g05.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:1854296 3'
8494	18367	28631	4.95	8.0E-81	BE394525.1	EST_HUMAN	601310531F1 NIH_MGC 44 Homo sapiens cDNA clone IMAGE:3632070 5'
6300	16164	26321	3.06	7.0E-81	A1822115.1	EST_HUMAN	zag1c08.x8 Soares_Fetal_lung_NbHL19W Homo sapiens cDNA clone IMAGE:299918 3'
4290	14188	23971	4.84	6.0E-81	BE256829.1	EST_HUMAN	601111970F1 NIH_MGC 16 Homo sapiens cDNA clone IMAGE:3352840 5'
4290	14188	23972	4.84	6.0E-81	BE256829.1	EST_HUMAN	601111970F1 NIH_MGC 16 Homo sapiens cDNA clone IMAGE:3352840 5'
5229	15153	24920	1.93	6.0E-81	4501848	NT	Homo sapiens ATP-binding cassette, sub-family A (ABC1), member 3 (ABCA3), mRNA
5229	15153	24921	1.93	6.0E-81	4501848	NT	Homo sapiens ATP-binding cassette, sub-family A (ABC1), member 3 (ABCA3), mRNA
7325	17201	27401	1.34	6.0E-81	AA360017.1	EST_HUMAN	EST99129 Fetal lung II Homo sapiens cDNA 5' end
9579	19166	25269	1.82	6.0E-81	BF579022.1	EST_HUMAN	602153666F1 NIH_MGC 83 Homo sapiens cDNA clone IMAGE:4294601 5'
9579	19166	25270	1.82	6.0E-81	BF579022.1	EST_HUMAN	602153666F1 NIH_MGC 83 Homo sapiens cDNA clone IMAGE:4294601 5'
2170	12057	21960	3.14	5.0E-81	BE286042.1	EST_HUMAN	601125505F1 NIH_MGC 8 Homo sapiens cDNA clone IMAGE:3345480 5'
6901	16780	26974	3.47	5.0E-81	AB007923.1	NT	Homo sapiens mRNA for KIAA0454 protein, partial cds
6901	16780	26975	3.47	5.0E-81	AB007923.1	NT	Homo sapiens mRNA for KIAA0454 protein, partial cds
8865	18677	28966	2.51	5.0E-81	9506634	NT	Homo sapiens hypothetical protein (FLJ11045), mRNA
214	10185	19998	0.87	4.0E-81	AF252257.1	NT	Homo sapiens CRP2 binding protein mRNA, partial cds

Page 289 of 413  
Table 4  
Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
1779	11678	21566	0.99	4.0E-81	AW779612.1	EST_HUMAN	ln98d02.x1 NCI_CGAP_Cot14 Homo sapiens cDNA clone IMAGE:3035907 3' similar to SW:COPG_BOVIN
3134	13059	22858	3.79	4.0E-81	AB037766.1	NT	P53620 COATOMER GAMMA SUBUNIT ; Homo sapiens mRNA for KIAA1345 protein, partial cds
3576	13490	23280	1.18	4.0E-81	AW004608.1	EST_HUMAN	ws90h03.x1 NCI_CGAP_Co3 Homo sapiens cDNA clone IMAGE:2605269 3' similar to TR:O43815 O43815
4068	13970	23746	2.14	4.0E-81	AF263306.1	NT	STRIATIN. ; Homo sapiens rab3 interacting protein variant 2 mRNA, partial cds
4068	13970	23747	2.14	4.0E-81	AF263306.1	NT	Homo sapiens rab3 interacting protein variant 2 mRNA, partial cds
6821	16700	26893	2.15	4.0E-81	X06989.1	NT	Human mRNA for amyloid A4(751) protein
6973	16850	27041	3.4	4.0E-81	U20197.1	NT	Human cone photoreceptor cGMP-phosphodiesterase alpha' subunit gene, exons 2 and 3
6973	16850	27042	3.4	4.0E-81	U20197.1	NT	Human cone photoreceptor cGMP-phosphodiesterase alpha' subunit gene, exons 2 and 3
7320	17196	27396	5.65	4.0E-81	AB018001.1	NT	Homo sapiens mRNA for Death-associated protein kinase 2, complete cds
7816	17666	27906	1.49	4.0E-81	11425281	NT	Homo sapiens ligase I, DNA, ATP-dependent (LIG1), mRNA
8522	18394	28658	2.24	4.0E-81	4759085	NT	Homo sapiens vesicle trafficking protein sec22b (SEC22B) mRNA
8522	18394	28659	2.24	4.0E-81	4759085	NT	Homo sapiens vesicle trafficking protein sec22b (SEC22B) mRNA
9069	19627	25007	3.81	4.0E-81	11417862	NT	Homo sapiens calcineurin binding protein 1 (KIAA0330), mRNA
9069	19627	25008	3.81	4.0E-81	11417862	NT	Homo sapiens calcineurin binding protein 1 (KIAA0330), mRNA
9612	19191	25263	2.52	4.0E-81	11417871	NT	Homo sapiens calcineurin binding protein 1 (KIAA0330), mRNA
9612	19191	25264	2.52	4.0E-81	11417871	NT	Homo sapiens beta-ureidopropionase (LOC51733), mRNA
9750	19275	25228	2.57	4.0E-81	11417974	NT	Homo sapiens beta-ureidopropionase (LOC51733), mRNA
1246	11153	21000	9.36	3.0E-81	Y18000.1	NT	Homo sapiens transcobalamin II; macrocytic anemia (TCN2), mRNA
1246	11153	21001	9.36	3.0E-81	Y18000.1	NT	Homo sapiens NF2 gene
2320	12201	22100	1.7	3.0E-81	AF077188.1	NT	Homo sapiens cullin 4A (CUL4A) mRNA, complete cds
2961	12888	22695	5.12	3.0E-81	4506280	NT	Homo sapiens pleiotrophin (heparin binding growth factor 8, neurite growth-promoting factor 1) (PTN) mRNA
2961	12888	22696	5.12	3.0E-81	4506280	NT	Homo sapiens pleiotrophin (heparin binding growth factor 8, neurite growth-promoting factor 1) (PTN) mRNA
4933	14811	22636	0.87	3.0E-81	AL163283.2	NT	Homo sapiens chromosome 21 segment HS21C083
2802	12732	22530	1.77	2.0E-81	BE784636.1	EST_HUMAN	601474072F1 NIH_MGC 68 Homo sapiens cDNA clone IMAGE:3877121 5'
2802	12732	22531	1.77	2.0E-81	BE784636.1	EST_HUMAN	601474072F1 NIH_MGC 68 Homo sapiens cDNA clone IMAGE:3877121 5'
3707	13620	23404	0.98	2.0E-81	AW611542.1	EST_HUMAN	hg85c01.x1 NCI_CGAP_Kid11 Homo sapiens cDNA clone IMAGE:2952384 3'
4579	14469	24256	0.85	2.0E-81	5453871	NT	Homo sapiens platelet-derived growth factor receptor-like (PDGFR) mRNA
9888	13620	23404	1.74	2.0E-81	AW611542.1	EST_HUMAN	hg85c01.x1 NCI_CGAP_Kid11 Homo sapiens cDNA clone IMAGE:2952384 3'
9888	13620	23404	1.74	2.0E-81	AW611542.1	EST_HUMAN	hg85c01.x1 NCI_CGAP_Kid11 Homo sapiens cDNA clone IMAGE:2952384 3'
9988	19375	25104	1.35	2.0E-81	8567387	NT	Homo sapiens period (Drosophila) homolog 3 (PER3), mRNA
1403	11308	21169	3.32	1.0E-81	W26539.1	EST_HUMAN	33f3 Human retina cDNA randomly primed sublibrary Homo sapiens cDNA

Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
3602	13516	23304	2	1.0E-81	AW960658.1	EST_HUMAN	EST1372729 IMAGE resequences, MAGF Homo sapiens cDNA
4414	14308	24091	3.07	1.0E-81	AA040370.1	EST_HUMAN	z145109.1 Soares_pregnant_uterus_NbHPU Homo sapiens cDNA clone IMAGE:485825 5' similar to
4546	14439	24222	7.85	1.0E-81	BE047996.1	EST_HUMAN	PIR:S52437 S52437 CDP-diacylglycerol synthase - fruit fly:
5203	15083	29103	9.03	1.0E-81	U87928.1	NT	tz4504.y1 NCI_CGAP_Bn52 Homo sapiens cDNA clone IMAGE:2291526 5'
5284	15206	24982	4.01	1.0E-81	11432966	NT	Human acrilate hydratase (AC02) gene, exon 3
5284	15206	24983	4.01	1.0E-81	11432966	NT	Homo sapiens polymerase (DNA directed), gamma (POLG), mRNA
5468	15388	25449	3.54	1.0E-81	U52351.1	NT	Homo sapiens polymerase (DNA directed), gamma (POLG), mRNA
5468	15388	25450	3.54	1.0E-81	U52351.1	NT	Homo sapiens arm-repeat protein NPRAP/neurojuncin (CTNND2) mRNA, partial cds
5737	15645	25750	3.15	1.0E-81	BF674641.1	EST_HUMAN	Homo sapiens arm-repeat protein NPRAP/neurojuncin (CTNND2) mRNA, partial cds
6567	16425	26606	6.4	1.0E-81	11432966	NT	602137864F1 NIH_MGC_83 Homo sapiens cDNA clone IMAGE:4274535 5'
7631	17482	27702	2.62	1.0E-81	BE988278.1	EST_HUMAN	Homo sapiens polymerase (DNA directed), gamma (POLG), mRNA
7631	17482	27703	2.62	1.0E-81	BE988278.1	EST_HUMAN	601645051F1 NIH_MGC_56 Homo sapiens cDNA clone IMAGE:3930228 5'
7726	17576	27799	4.81	1.0E-81	BE594367.1	EST_HUMAN	601645051F1 NIH_MGC_56 Homo sapiens cDNA clone IMAGE:3930228 5'
7819	17669	27909	2.93	1.0E-81	BE744545.1	EST_HUMAN	601343180F1 NIH_MGC_53 Homo sapiens cDNA clone IMAGE:3685483 5'
7819	17669	27910	2.93	1.0E-81	BE744545.1	EST_HUMAN	601577339F1 NIH_MGC_9 Homo sapiens cDNA clone IMAGE:3838280 5'
8000	17850	28091	1.46	1.0E-81	AW897550.1	EST_HUMAN	601577339F1 NIH_MGC_9 Homo sapiens cDNA clone IMAGE:3838280 5'
8438	18312	28568	1.96	1.0E-81	AW844986.1	EST_HUMAN	CM3-NN0059-140400-147-a12 NN0059 Homo sapiens cDNA
8438	18312	28569	1.96	1.0E-81	AW844986.1	EST_HUMAN	MRO-CT0006-250599-019 CT0006 Homo sapiens cDNA
8594	18516	23304	2.42	1.0E-81	AW960658.1	EST_HUMAN	MRO-CT0006-250599-019 CT0006 Homo sapiens cDNA
8810	18624	28915	1.96	1.0E-81	BF204253.1	EST_HUMAN	EST1372729 IMAGE resequences, MAGF Homo sapiens cDNA
9278	18981	25325	3.62	1.0E-81	11418138	NT	601867714F1 NIH_MGC_17 Homo sapiens cDNA clone IMAGE:4110459 5'
12	9998	19789	1.87	8.0E-82	AF161406.1	NT	Homo sapiens phorbol (similar to apolipoprotein B mRNA editing protein) (DJ742C19.2), mRNA
101	9998	19789	1.28	8.0E-82	AF161406.1	NT	Homo sapiens HSPC288 mRNA, partial cds
263	10228	20044	1.66	8.0E-82	U08988.1	NT	Homo sapiens HSPC288 mRNA, partial cds
797	10726	20566	2.17	8.0E-82	U08988.1	NT	Human CRFB4 gene, partial cds
869	10795	20645	1.11	8.0E-82	U08988.1	NT	Human CRFB4 gene, partial cds
1475	11380	21244	1.12	8.0E-82	AB037748.1	NT	Human CRFB4 gene, partial cds
1636	11540	21400	1.24	8.0E-82	6715601	NT	Homo sapiens mRNA for KIAA1327 protein, partial cds
4150	14050	23825	0.81	8.0E-82	8923432	NT	Homo sapiens glutathione peroxidase 5 (epididymal androgen-related protein) (GPX5), transcript variant 2, mRNA
1434	11339		1.27	7.0E-82	BF035327.1	EST_HUMAN	Homo sapiens hypothetical protein FLJ20461 (FLJ20461), mRNA
2739	12601	22495	1.82	7.0E-82	AU144050.1	EST_HUMAN	601458531F1 NIH_MGC_66 Homo sapiens cDNA clone IMAGE:3862086 5'
4034	13837	23713	0.81	5.0E-82	AA515512.1	EST_HUMAN	AU144050 HEMBA1 Homo sapiens cDNA clone HEMBA1000762 3'

Page 291 of 413  
Table 4  
Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
1647	11551	21412	6.51	4.0E-82	AF081484.1	NT	Homo sapiens alpha-tubulin isoform 1 mRNA, complete cds
8954	18761	29054	6.47	4.0E-82	AI937300.1	EST_HUMAN	wp75e09.x1 NCI_CGAP_Brn25 Homo sapiens cDNA clone IMAGE:2467624 3' similar to TR:O75276
9519	19130		6.19	4.0E-82	AF029701.2	NT	O75276 PKD1 ;
							Homo sapiens presenilin-1 gene, exons 1 and 2
276	10242	20061	13.75	3.0E-82	4502166	NT	Homo sapiens amyloid beta (A4) precursor protein (protease nexin-II, Alzheimer disease) (APP), mRNA
687	10620	20446	2.19	3.0E-82	BE005705.1	EST_HUMAN	RC2-BN0120-010400-013-02 BN0120 Homo sapiens cDNA
770	10700	20539	4.44	3.0E-82	5174702	NT	Homo sapiens transforming growth factor beta-activated kinase-binding protein 1 (TAB1), mRNA
852	10779	20629	3.22	3.0E-82	4502166	NT	Homo sapiens amyloid beta (A4) precursor protein (protease nexin-II, Alzheimer disease) (APP), mRNA
1045	10963		13.76	3.0E-82	AA725848.1	EST_HUMAN	ai23e05.s1 Soares_testis_NHT Homo sapiens cDNA clone 1343648 3'
1333	11240	21098	5.47	3.0E-82	AW875073.1	EST_HUMAN	RC6-PT0001-190100-021-B02 PT0001 Homo sapiens cDNA
1450	11355	21219	2.03	3.0E-82	AL163285.2	NT	Homo sapiens chromosome 21 segment HS21C085
1859	11755	21630	1.82	3.0E-82	BE813232.1	EST_HUMAN	RC1-BN0005-260700-018-g04 BN0005 Homo sapiens cDNA
1961	11855	21744	0.9	3.0E-82	4501922	NT	Homo sapiens adenylate cyclase activating polypeptide 1 (pituitary) receptor type I (ADCYAP1R1) mRNA
3234	13158		2.06	3.0E-82	5453811	NT	Homo sapiens neurotrophic tyrosine kinase, receptor, type 2 (NTRK2) mRNA
4836	14718	24501	0.91	3.0E-82	AA135979.1	EST_HUMAN	zn93b04.r1 Stratagene lung carcinoma 937218 Homo sapiens cDNA clone IMAGE:565711 5' similar to
6738	16617	26807	2.84	3.0E-82	11425206	NT	SW:PAGT_BOVIN_Q07537 POLYPEPTIDE N-ACETYL GALACTOSAMINYL TRANSFERASE ;
7654	17504	27728	3.79	3.0E-82	AB029000.1	NT	Homo sapiens ankyrin-like with transmembrane domains 1 (ANKTM1), mRNA
7654	17504	27729	3.79	3.0E-82	AB029000.1	NT	Homo sapiens mRNA for KIAA1077 protein, partial cds
582	10520	20326	1.92	2.0E-82	AB023216.1	NT	Homo sapiens mRNA for KIAA0999 protein, partial cds
582	10520	20327	1.92	2.0E-82	AB023216.1	NT	Homo sapiens mRNA for KIAA0999 protein, partial cds
1660	11562	21428	1.75	2.0E-82	AL046390.1	EST_HUMAN	Homo sapiens mRNA for KIAA0999 protein, partial cds
3772	13684	23466	1.14	2.0E-82	D87675.1	NT	DKFp434M117.1 434 (synonym: htes3) Homo sapiens cDNA clone DKFp434M117 5'
4140	14040	23815	1.14	2.0E-82	4504116	NT	Homo sapiens DNA for amyloid precursor protein, complete cds
4458	14352	24143	0.98	2.0E-82	AB029019.1	NT	Homo sapiens glutamate receptor, ionotropic, kainate 1 (GRIK1) mRNA
4458	14352	24144	0.98	2.0E-82	AB029019.1	NT	Homo sapiens mRNA for KIAA1096 protein, partial cds
							Homo sapiens mRNA for KIAA1096 protein, partial cds
4768	14653	24441	3.18	2.0E-82	AF045555.1	NT	Homo sapiens wbscr1 (WBSR1) and wbscr5 (WBSR5) genes, complete cds, alternatively spliced and
5013	14887	24653	1.66	2.0E-82	4507580	NT	replication factor C subunit 2 (RFC2) gene, complete cds
5013	14887	24654	1.66	2.0E-82	4507580	NT	Homo sapiens tumor necrosis factor receptor superfamily, member 5 (TNFRSF5) mRNA
							Homo sapiens tumor necrosis factor receptor superfamily, member 5 (TNFRSF5) mRNA

Page 292 of 413  
Table 4

Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
5358	15278	25108	2.37	2.0E-82	AB018270.1	NT	Homo sapiens mRNA for KIAA0727 protein, partial cds
5746	15654	25762	4.96	2.0E-82	AF234882.1	NT	Homo sapiens FAM4A1 splice variant a (FAM4A1) mRNA, complete cds
6834	16713	26906	2.23	2.0E-82	11321570	NT	Homo sapiens slit (Drosophila) homolog 3 (SLIT3), mRNA
7821	17671	27912	1.2	2.0E-82	Y08032.1	NT	Human endogenous retrovirus-K, LTR U5 and gag gene
7821	17671	27913	1.2	2.0E-82	Y08032.1	NT	Human endogenous retrovirus-K, LTR U5 and gag gene
8628	18493	28766	6.98	2.0E-82	U80736.1	NT	Homo sapiens CAGF9 mRNA, partial cds
8628	18493	28767	6.98	2.0E-82	U80736.1	NT	Homo sapiens CAGF9 mRNA, partial cds
9097	18868		2.23	2.0E-82	N94950.1	EST_HUMAN	Homo sapiens CAGF9 mRNA, partial cds
9632	19205		2.57	2.0E-82	AA011278.1	EST_HUMAN	Zb31d10.s1 Scores: parathyroid tumor, NBHPA Homo sapiens cDNA clone IMAGE:305203 3'
9923	19395		1.44	2.0E-82	11418097	NT	Z01g09.r1 Scores: fetal_liver_spleen_1NFLS_S1 Homo sapiens cDNA clone IMAGE:429588 5'
577	10515	20321	1.45	1.0E-82	11545921	NT	Homo sapiens SRY (sex determining region Y)-box 10 (SOX10), mRNA
1190	11100		0.9	1.0E-82	BE885106.1	EST_HUMAN	Homo sapiens melanoma differentiation associated protein-5 (MDA5), mRNA
1264	11171	21020	1.91	1.0E-82	BE064386.1	EST_HUMAN	601510859F1 NIH_MGC_71 Homo sapiens cDNA clone IMAGE:3912207 5'
1265	11172	21021	0.83	1.0E-82	AB011110.2	NT	RC4-BT0310-110300-015-f10 BT0310 Homo sapiens cDNA
7882	17732		1.38	1.0E-82	BF515938.1	EST_HUMAN	Homo sapiens mRNA for KIAA0538 protein, partial cds
8128	18016	28264	2.57	1.0E-82	AL163209.2	NT	UIH-BW1-aca-f-03-0-UI.s1 NCL_CGAP_Sub7 Homo sapiens cDNA clone IMAGE:3084053 3'
8373	18250	28500	1.76	1.0E-82	AL163246.2	NT	Homo sapiens chromosome 21 segment HS21C009
7057	16934	27124	4.7	9.0E-83	BF672220.1	EST_HUMAN	Homo sapiens chromosome 21 segment HS21C046
1392	11297	21155	1.88	8.0E-83	BE383973.1	EST_HUMAN	602150403F1 NIH_MGC_81 Homo sapiens cDNA clone IMAGE:4291561 5'
1656	12647	21422	1.96	8.0E-83	N68951.1	EST_HUMAN	601273346F1 NIH_MGC_20 Homo sapiens cDNA clone IMAGE:3614362 5'
2836	12764		1.64	7.0E-83	AA594655.1	EST_HUMAN	za48f12.s1 Scores: fetal liver spleen 1NFLS Homo sapiens cDNA clone IMAGE:295823 3'
4710	14596		5.49	7.0E-83	BF221813.1	EST_HUMAN	not2h01.s1 NCL_CGAP_Phe1 Homo sapiens cDNA clone IMAGE:1100497 3' similar to contains Alu repetitive element;
397	10343	20169	1.34	6.0E-83	M33320.1	NT	7p37a07.x1 NCL_CGAP_Pr28 Homo sapiens cDNA clone IMAGE:3647893 3' similar to TR:Q9Y316 Q9Y316 DJ207H1.1 ;
1747	11647	21515	1.5	6.0E-83	AW573088.1	EST_HUMAN	Human platelet Glycoprotein IIb (GPIIb) gene, exons 2-29
2984	12912	22709	1.09	6.0E-83	AW816405.1	EST_HUMAN	hf31h03.x1 Scores: NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2633525 3' similar to SW:YBEB_HAEIN_P44471 HYPOTHETICAL PROTEIN H10034. ;
3031	12959	22751	0.94	6.0E-83	AA701457.1	EST_HUMAN	QV4-ST0234-181199-037-405 ST0234 Homo sapiens cDNA
3515	13431	23231	0.95	6.0E-83	11430241	NT	z159c05.s1 Scores: fetal_liver_spleen_1NFLS_S1 Homo sapiens cDNA clone IMAGE:435080 3'
5236	15160	24928	1.72	6.0E-83	4507866	NT	Homo sapiens hypothetical protein FLJ10379 (FLJ10379), mRNA
5669	15579	25679	2.13	6.0E-83	AJ010770.1	NT	Homo sapiens VAMP (vesicle-associated membrane protein)-associated protein A (33kD) (VAPA) mRNA, and translated products
6430	16291	26452	1.79	6.0E-83	11422024	NT	Homo sapiens hyperion gene, exons 1-50
							Homo sapiens met proto-oncogene (hepatocyte growth factor receptor) (MET), mRNA



Page 293 of 413  
Table 4  
Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
7579	17430	27644	6.77	6.0E-83	4505314	NT	Homo sapiens myomesin (M-protein) 2 (165kD) (MYOM2), mRNA
8817	18630		6.32	6.0E-83	AA486105.1	EST_HUMAN	ab14e10.s1 Stragene lung (#937210) Homo sapiens cDNA clone IMAGE:840810 3' similar to contains THR.12 THR repetitive element ;
9050	18834		3.11	6.0E-83	AF240786.1	NT	Homo sapiens glutathione S-transferase theta 2 (GSTT2) and glutathione S-transferase theta 1 (GSTT1) genes, complete cds
931	10856		4.14	5.0E-83	U17883.1	NT	Human succinate dehydrogenase iron-protein subunit (sdhB) gene, exon 5
2004	12649		2.1	5.0E-83	AF006305.1	NT	Homo sapiens 26S proteasome regulatory subunit (SUG2) mRNA, complete cds
3586	13500	23289	0.92	5.0E-83	AL133207.2	NT	Novel human gene mapping to chromosome X
5011	14885	24651	10.99	5.0E-83	4557013	NT	Homo sapiens catalase (CAT) mRNA
5011	14885	24652	10.99	5.0E-83	4557013	NT	Homo sapiens catalase (CAT) mRNA
5094	14964	24739	0.86	5.0E-83	AF083827.1	NT	Homo sapiens dihydropyridine receptor alpha 2 subunit (CACNA2D1) gene, exon 11
624	10561	20373	1.47	4.0E-83	AF224669.1	NT	Homo sapiens mannosidase, beta A, lysosomal (MANBA) gene, and ubiquitin-conjugating enzyme E2D 3 (UBE2D3) genes, complete cds
3469	13385	23190	0.96	4.0E-83	BE888078.1	EST_HUMAN	601511580F1 NIH_MGC_71 Homo sapiens cDNA clone IMAGE:3913195 5'
981	10904		4.5	3.0E-83	AA368311.1	EST_HUMAN	EST79542 Placenta 1 Homo sapiens cDNA similar to similar to endogenous retrovirus ERV9
2750	12612		1.82	3.0E-83	AA632654.1	EST_HUMAN	np87c07.s1 NCJ_CGAP_Thy1 Homo sapiens cDNA clone IMAGE:1133292 similar to contains THR.12 THR repetitive element ;
1759	11658	21529	1.9	2.0E-83	AA993492.1	EST_HUMAN	o164g05.s1 Soares_testis_NHT Homo sapiens cDNA clone IMAGE:1621592 3' similar to TR:Q92614
1759	11658	21530	1.9	2.0E-83	AA993492.1	EST_HUMAN	o164g05.s1 Soares_testis_NHT Homo sapiens cDNA clone IMAGE:1621592 3' similar to TR:Q92614
1883	11779	21654	2.23	2.0E-83	NG6951.1	EST_HUMAN	Q92614 MYELOBLAST KIAA0216 ;
2821	12750	22542	1.11	2.0E-83	BE828694.1	EST_HUMAN	za48f12.s1 Soares_fetal liver spleen tNFLS Homo sapiens cDNA clone IMAGE:295823 3'
3231	13155		1.82	2.0E-83	11430834	NT	RC6-ET0046-280600-013-H12 ET0046 Homo sapiens cDNA
3708	13621		1	2.0E-83	AL163202.2	NT	Homo sapiens sal (Drosophila)-like 1 (SALL1), mRNA
4241	14140	23915	4.47	2.0E-83	AF202879.1	NT	Homo sapiens chromosome 21 segment HS21C002
4553	14446	24230	8.13	2.0E-83	7706398	NT	Homo sapiens hematopoietic progenitor cell antigen CD34 precursor (CD34) mRNA, partial cds
4553	14446	24231	8.13	2.0E-83	7706398	NT	Homo sapiens ankyrin repeat-containing protein ASB-2 (LOC51676), mRNA
5359	15279	25109	23.35	2.0E-83	11024711	NT	Homo sapiens ankyrin repeat-containing protein ASB-2 (LOC51676), mRNA
5359	15279	25110	23.35	2.0E-83	11024711	NT	Homo sapiens myosin, heavy polypeptide 4, skeletal muscle (MYH4), mRNA
6396	16258	26419	5.9	2.0E-83	AF129533.1	NT	Homo sapiens myosin, heavy polypeptide 4, skeletal muscle (MYH4), mRNA
6659	16539	26736	1.52	2.0E-83	U66707.1	NT	Homo sapiens F-box protein Fbx3b (FBL3B) mRNA, partial cds
6839	16718	26911	2.56	2.0E-83	AF011920.1	NT	Rattus norvegicus densin-180 mRNA, complete cds
6839	16718	26912	2.56	2.0E-83	AF011920.1	NT	Homo sapiens protein kinase CK2 catalytic subunit alpha gene, exon 1
6839	16718	26912	2.56	2.0E-83	AF011920.1	NT	Homo sapiens protein kinase CK2 catalytic subunit alpha gene, exon 1



Page 294 of 413  
Table 4  
Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
7767	17617	27845	3.32	2.0E-83	M22094.1	NT	Human neural cell adhesion molecule (N-CAM) secreted isoform mRNA, 3' end
7767	17617	27846	3.32	2.0E-83	M22094.1	NT	Human neural cell adhesion molecule (N-CAM) secreted isoform mRNA, 3' end
7826	17676	27920	1.21	2.0E-83	AU117659.1	EST_HUMAN	AU117659 HEMBA1 Homo sapiens cDNA clone HEMBA1001910 5'
8223	18105	28358	3.7	2.0E-83	11436443	NT	Homo sapiens KIAA0985 protein (KIAA0985), mRNA
8298	18177	28422	1.82	2.0E-83	AL134452.1	EST_HUMAN	DKFZp547J135_r1 547 (synonym: hibr1) Homo sapiens cDNA clone DKFZp547J135 5'
8298	18177	28423	1.82	2.0E-83	AL134452.1	EST_HUMAN	DKFZp547J135_r1 547 (synonym: hibr1) Homo sapiens cDNA clone DKFZp547J135 5'
9667	19226		3.48	2.0E-83	AB011399.1	NT	Homo sapiens gene for AF-6, complete cds
1390	11295	21152	16.57	1.0E-83	4504326	NT	Homo sapiens hydroxacyl-Coenzyme A dehydrogenase/3-ketoacyl-Coenzyme A thiolase/Coenzyme A hydratase (trifunctional protein), beta subunit (HADHB) mRNA
1390	11295	21153	16.57	1.0E-83	4504326	NT	Homo sapiens hydroxacyl-Coenzyme A dehydrogenase/3-ketoacyl-Coenzyme A thiolase/Coenzyme A hydratase (trifunctional protein), beta subunit (HADHB) mRNA
2620	12488	22378	1.6	1.0E-83	BE883690.1	EST_HUMAN	601507375F1 NIH_MGC_71 Homo sapiens cDNA clone IMAGE:3908754 5'
3146	13071	22872	0.84	1.0E-83	7662349	NT	Homo sapiens cell recognition molecule Caspr2 (KIAA0868), mRNA
3793	13705	23491	3.55	1.0E-83	AF053768.1	NT	Rattus norvegicus brain specific cortactin-binding protein CBP90 mRNA, partial cds
4151	14051	23826	2.22	1.0E-83	Z25822.1	NT	H. sapiens gene for mitochondrial dodecenoyl-CoA delta-isomerase, exon 3
4789	14674	24461	1.36	1.0E-83	4502166	NT	Homo sapiens amyloid beta (A4) precursor protein (protease nexin-II, Alzheimer disease) (APP), mRNA
6022	15926	26057	1.75	1.0E-83	A1027614.1	EST_HUMAN	ov99b08.x1 Soares_testis_NHT Homo sapiens cDNA clone IMAGE:1645431 3' similar to gb:M64241 QM PROTEIN (HUMAN);
3727	13639	23425	2.82	7.0E-84	BE901209.1	EST_HUMAN	601676023F1 NIH_MGC_21 Homo sapiens cDNA clone IMAGE:3958853 5'
1273	11180	21028	4.21	6.0E-84	BE838864.1	EST_HUMAN	RC2-FN0119-200600-011-g05 FN0119 Homo sapiens cDNA
1273	11180	21029	4.21	6.0E-84	BE838864.1	EST_HUMAN	RC2-FN0119-200600-011-g05 FN0119 Homo sapiens cDNA
2348	12228	22125	4.76	6.0E-84	AA776574.1	EST_HUMAN	ae86a03.s1 Stratagene schizo brain S11 Homo sapiens cDNA clone IMAGE:971020 3'
5206	15085		6.24	6.0E-84	AL042863.2	EST_HUMAN	DKFZp434H0322_r1 434 (synonym: htes3) Homo sapiens cDNA clone DKFZp434H0322 5'
5388	15307	25160	1.7	6.0E-84	AA897339.1	EST_HUMAN	al47g03.s1 Soares_NFL_T_GBC_S11 Homo sapiens cDNA clone IMAGE:1460500 3' similar to gb:M14338
6415	18277	26440	3.17	6.0E-84	BE810371.1	EST_HUMAN	VITAMIN K-DEPENDENT PROTEIN S PRECURSOR (HUMAN);
6706	16586	26774	1.9	6.0E-84	BE770199.1	EST_HUMAN	PM0-LT0019-190600-004-F02 LT0019 Homo sapiens cDNA
8821	18634		1.94	6.0E-84	AW369812.1	EST_HUMAN	PM4-FT0054-160800-004-e10 FT0054 Homo sapiens cDNA
697	10630	20456	1.06	5.0E-84	AA382811.1	EST_HUMAN	IL0-BT0168-091199-139-e06 BT0168 Homo sapiens cDNA
2981	12908		1.01	5.0E-84	AF109718.1	NT	EST96094 Testis I Homo sapiens cDNA 5' end
8830	18643	28926	2.76	5.0E-84	11428740	NT	Homo sapiens chromosome 3 subtelomeric region
1354	11260	21116	1.08	4.0E-84	AB037735.1	NT	Homo sapiens regulatory factor X, 3 (influences HLA class II expression) (RFX3), mRNA
							Homo sapiens mRNA for KIAA1314 protein, partial cds

Page 295 of 413  
Table 4

Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
1389	11294	21151	4.03	4.0E-84	AI685321.1	EST_HUMAN	wa76c04.x1 Soares_NFL_T_GBC_S1 Homo sapiens cDNA clone IMAGE:2302086 3' similar to SW:NRDC_HUMAN O49847 NARDILYSIN PRECURSOR;
4869	14749	24529	1.76	4.0E-84	AF069601.2	NT	Homo sapiens myosin light chain kinase isoform 2 (MLCK) mRNA, complete cds
5060	14930	24701	1.27	4.0E-84	U94982.1	NT	Human 2,4-dienoyl-CoA reductase gene, exons 3 and 4
5416	15336	25388	1.31	4.0E-84	11386168	NT	Homo sapiens protein tyrosine phosphatase, receptor type, G (PTPRG), mRNA
5416	15336	25389	1.31	4.0E-84	11386168	NT	Homo sapiens protein tyrosine phosphatase, receptor type, G (PTPRG), mRNA
5791	15597	25805	2.35	4.0E-84	AF059650.1	NT	Homo sapiens histone deacetylase 3 (HDAC3) gene, complete cds
6507	16366	26543	12.15	4.0E-84	11421326	NT	Homo sapiens KIAA0783 gene product (KIAA0783), mRNA
8290	18169	28413	6.56	4.0E-84	AB032956.1	NT	Homo sapiens mRNA for KIAA1130 protein, partial cds
313	10275	20094	1.36	3.0E-84	AF026200.1	NT	Homo sapiens Bach1 protein homolog mRNA, partial cds
1137	11051	20891	0.89	3.0E-84	4758081	NT	Homo sapiens chondroitin sulfate proteoglycan 2 (versican) (CSPG2) mRNA
1917	11812	21690	1.15	3.0E-84	5453855	NT	Homo sapiens pericentriolar material 1 (PCM1) mRNA
1962	11856	21745	3.03	3.0E-84	AL096880.1	NT	Novel human mRNA containing Zinc finger C2H2 type domains
3542	13458	23251	1.18	3.0E-84	AB026898.1	NT	Homo sapiens DNA, DLEC1 to ORCTL4 gene region, section 1/2 (DLEC1, ORCTL3, ORCTL4 genes, complete cds)
3689	13602	23389	4.11	3.0E-84	AF014459.1	NT	Homo sapiens X-linked juvenile retinoschisis precursor protein (XLR51) mRNA, complete cds
8253	18133		7.8	3.0E-84	AI983801.1	EST_HUMAN	wu20d05.x1 Soares_Dieckgraefe_colon_NHCD Homo sapiens cDNA clone IMAGE:2520585 3' similar to gb:U05093 60S RIBOSOMAL PROTEIN L18A (HUMAN);
2058	11948	21845	5.89	2.0E-84	BE695397.1	EST_HUMAN	CM1-BT0795-190600-272-b08 BT0795 Homo sapiens cDNA
2058	11948	21846	5.89	2.0E-84	BE695397.1	EST_HUMAN	CM1-BT0795-190600-272-b08 BT0795 Homo sapiens cDNA
2913	12840	22640	9.55	2.0E-84	AF036943.1	NT	Homo sapiens myelin transcription factor 1-like (MYT1L) mRNA, complete cds
2932	12859	22659	0.93	2.0E-84	X89211.1	NT	H.sapiens DNA for endogenous retroviral like element
4682	14568	24364	1.11	2.0E-84	BF308518.1	EST_HUMAN	601887664F1 NIH_MGC_17 Homo sapiens cDNA clone IMAGE:4121727 5'
4682	14568	24365	1.11	2.0E-84	BF308518.1	EST_HUMAN	601887664F1 NIH_MGC_17 Homo sapiens cDNA clone IMAGE:4121727 5'
6695	16575		1.67	2.0E-84	AI298674.1	EST_HUMAN	qm87c09.x1 NCL_CGAP_Lu5 Homo sapiens cDNA clone IMAGE:1895728 3'
9308	19003	25334	1.89	2.0E-84	BF448000.1	EST_HUMAN	nae30a02.x1 Lupscki_sympathetic_trunk Homo sapiens cDNA clone IMAGE:4090251 3' similar to nae30a02.x1 Lupscki_sympathetic_trunk Homo sapiens cDNA clone IMAGE:4090251 3' similar to TR:Q9UGS3 Q9UGS3 DJ756G23.1;
9308	19003	25335	1.89	2.0E-84	BF448000.1	EST_HUMAN	nae30a02.x1 Lupscki_sympathetic_trunk Homo sapiens cDNA clone IMAGE:4090251 3' similar to TR:Q9UGS3 Q9UGS3 DJ756G23.1;
309	10271	20090	1.53	1.0E-84	AF114488.1	NT	Homo sapiens intercalin short isoform (ITSN) mRNA, complete cds
537	10478	20290	5.2	1.0E-84	4507952	NT	Homo sapiens tyrosine 3-monooxygenase/tryptophan 5-monooxygenase activation protein, zeta polypeptide (YWHAZ) mRNA
703	10636		0.99	1.0E-84	11427631	NT	Homo sapiens complement component 5 (C5), mRNA
1271	11178	21026	1.92	1.0E-84	AA984379.1	EST_HUMAN	am85b11.s1 Stratagene schizo brain S11 Homo sapiens cDNA clone IMAGE:1629885 3'

Table 4

## Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
2008	11900	21790	3.13	1.0E-84	BE392137.1	EST_HUMAN	601308006F1 NIH_MGC_44 Homo sapiens cDNA clone IMAGE:3626257 5'
2176	12063	21964	1.08	1.0E-84	11427197	NT	Homo sapiens pericentriolar material 1 (PCM1), mRNA
3691	13605	23391	2.14	1.0E-84	AA720851.1	EST_HUMAN	nm12e06.s1 NC1_CGAP_SST1 Homo sapiens cDNA clone IMAGE:1239106 3'
4319	14216	23998	5.59	1.0E-84	AJ229041.1	NT	Homo sapiens 959 kb contig between AML1 and CBR1 on chromosome 21q22; segment 1/3
4601	14489	24275	3.82	1.0E-84	AL043314.2	EST_HUMAN	DKFZp434N0323_r1 434 (synonym: htes3) Homo sapiens cDNA clone DKFZp434N0323 5'
4601	14489	24276	3.82	1.0E-84	AL043314.2	EST_HUMAN	DKFZp434N0323_r1 434 (synonym: htes3) Homo sapiens cDNA clone DKFZp434N0323 5'
4823	14216	23998	4.29	1.0E-84	AJ229041.1	NT	Homo sapiens 959 kb contig between AML1 and CBR1 on chromosome 21q22; segment 1/3
5757	15665	25773	1.52	1.0E-84	S73482.1	NT	uterine water channel=28 kda erythrocyte integral membrane protein homolog [human, uterus, mRNA, 1340 nt]
6113	16007	26143	1.49	1.0E-84	AL049784.1	NT	Novel human gene mapping to chromosome 13
6113	16007	26144	1.49	1.0E-84	AL049784.1	NT	Novel human gene mapping to chromosome 13
6220	16086	26236	1.96	1.0E-84	AL049784.1	NT	Novel human gene mapping to chromosome 13
6414	16276	26439	3.12	1.0E-84	8393994	NT	Homo sapiens polymerase (DNA directed), alpha (POLA), mRNA
6483	16324	26490	1.8	1.0E-84	11430848	NT	Homo sapiens NGFI-A binding protein 1 (ERG1 binding protein 1) (NAB1), mRNA
7495	17365	24884	2.45	1.0E-84	5031984	NT	Homo sapiens nuclear transport factor 2 (placental protein 15) (PPI5), mRNA
7639	15091	24884	1.85	1.0E-84	4507848	NT	Homo sapiens ubiquitin specific protease 13 (isopeptidase T-3) (USP13) mRNA
7639	15091	24885	1.85	1.0E-84	4507848	NT	Homo sapiens ubiquitin specific protease 13 (isopeptidase T-3) (USP13) mRNA
9190	18925		2.98	1.0E-84	11417812	NT	Homo sapiens purinergic receptor P2X-like 1, orphan receptor (P2RXL1), mRNA
9298	18998	25330	9.8	1.0E-84	11418185	NT	Homo sapiens aconitase 2, mitochondrial (ACO2), mRNA
951	10875		1.17	9.0E-85	AL163209.2	NT	Homo sapiens chromosome 21 segment HS21C009
1057	10974	20816	2.3	9.0E-85	U51432.1	NT	Homo sapiens nuclear protein Skip mRNA, complete cds
1057	10974	20817	2.3	9.0E-85	U51432.1	NT	Homo sapiens nuclear protein Skip mRNA, complete cds
1560	11465	21322	1.07	9.0E-85	M33282.1	NT	Human plasminogen gene, exon 7
1560	11465	21323	1.07	9.0E-85	M33282.1	NT	Human plasminogen gene, exon 7
1651	11554	21417	4.93	9.0E-85	7657020	NT	Homo sapiens DKFZp434P211 protein (DKFZP434P211), mRNA
4158	14058	23832	0.94	9.0E-85	AL163280.2	NT	Homo sapiens chromosome 21 segment HS21C080
4778	14662	24449	1.14	9.0E-85	5901979	NT	Homo sapiens heat shock transcription factor 2 binding protein (HSF2BP), mRNA
4825	14707	24491	1.01	9.0E-85	AL163288.2	NT	Homo sapiens chromosome 21 segment HS21C068
9819	11554	21417	1.27	9.0E-85	7657020	NT	Homo sapiens DKFZp434P211 protein (DKFZP434P211), mRNA
1120	11035	20877	3.24	7.0E-85	L05094.1	NT	Homo sapiens ribosomal protein L27 mRNA, complete cds
8910	18718		5.81	7.0E-85	AF113210.1	NT	Homo sapiens MSTP030 mRNA, complete cds
8718	18535	28819	2.56	6.0E-85	11438573	NT	Homo sapiens DEAD/H (Asp-Glu-Ala-Asp/His) box polypeptide 10 (RNA helicase) (DDX10), mRNA

Table 4

## Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
8748	18535	28820	2.56	6.0E-85	11438573	NT	Homo sapiens DEAD/H (Asp-Glu-Ala-Asp/His) box polypeptide 10 (RNA helicase) (DDX10), mRNA
2285	12168	22066	1.21	5.0E-85	AL163284.2	NT	Homo sapiens chromosome 21 segment HS21C084
8482	18335	28598	1.9	5.0E-85	AF224669.1	NT	Homo sapiens mannosidase, beta A, lysosomal (MANBA) gene, and ubiquitin-conjugating enzyme E2D 3 (UBE2D3) genes, complete cds
9886	15094		2.45	5.0E-85	AF211189.1	NT	Homo sapiens T-type calcium channel alpha1 subunit Alpha1-e isoform (CACNA1I) mRNA, complete cds
5738	15646	25751	1.66	4.0E-85	BF677910.1	EST_HUMAN	602084730F1 NIH_MGC_83 Homo sapiens cDNA clone IMAGE:4249087 5'
5738	15646	25752	1.66	4.0E-85	BF677910.1	EST_HUMAN	602084730F1 NIH_MGC_83 Homo sapiens cDNA clone IMAGE:4249087 5'
8017	17867		1.68	4.0E-85	BE079263.1	EST_HUMAN	RC1-BT0623-120200-011-c07 BT0623 Homo sapiens cDNA
9237	19549		1.97	4.0E-85	Z18867.1	EST_HUMAN	HSDEHGC03 Stralagene cDNA library Human heart, cat#936208 Homo sapiens cDNA clone HEGC03
1277	11185	21035	1.15	3.0E-85	AF096157.1	NT	Homo sapiens protein phosphatase 2A BR gamma subunit gene, exon 6
1741	11642	21509	3.37	3.0E-85	T97495.1	EST_HUMAN	ye53g09.r1 Soares fetal liver spleen 1NFLS Homo sapiens cDNA clone IMAGE:121504 5'
4219	14117	23894	0.94	3.0E-85	BE267189.1	EST_HUMAN	601189704F2 NIH_MGC_7 Homo sapiens cDNA clone IMAGE:3533616 5'
4805	14689	24475	1.73	3.0E-85	11024696	NT	Homo sapiens F-box only protein 24 (FBXO24), mRNA
4805	14689	24476	1.73	3.0E-85	11024696	NT	Homo sapiens F-box only protein 24 (FBXO24), mRNA
4884	14744	24523	8.66	3.0E-85	AB046783.1	NT	Homo sapiens mRNA for KIAA1563 protein, partial cds
4883	14764	24540	0.94	3.0E-85	7363442	NT	Homo sapiens olfactory receptor, family 12, subfamily D, member 2 (OR12D2), mRNA
5729	15636	25739	6.94	3.0E-85	7662309	NT	Homo sapiens KIAA0793 gene product (KIAA0793), mRNA
5729	15636	25740	6.94	3.0E-85	7662309	NT	Homo sapiens KIAA0793 gene product (KIAA0793), mRNA
6152	16025		7.04	3.0E-85	A1404488.1	NT	Homo sapiens mRNA for dynein heavy chain (DNAH9 gene)
6594	16474	26663	1.61	3.0E-85	U44953.1	NT	Homo sapiens DENN mRNA, complete cds
7190	17087	27256	4.05	3.0E-85	11430889	NT	Homo sapiens phospholipase C, epsilon (PLOC), mRNA
8796	18610	28901	2.28	3.0E-85	5031660	NT	Homo sapiens EGF-like repeats and discoidin I-like domains 3 (EDIL3), mRNA
9788	19298		2.66	3.0E-85	11418177	NT	Homo sapiens Ran GTPase activating protein 1 (RANGAP1), mRNA
947	10871	20719	0.87	2.0E-85	7657266	NT	Homo sapiens KIAA0929 protein Mx2 interacting nuclear target (MINT) homolog (KIAA0929), mRNA
1024	10942	20786	1.85	2.0E-85	AF248540.1	NT	Homo sapiens intersecin 2 (SH3D1B) mRNA, complete cds
1400	11305	21164	7.1	2.0E-85	5174775	NT	Homo sapiens apolipoprotein C-II (APOC2) mRNA
1400	11305	21165	7.1	2.0E-85	5174775	NT	Homo sapiens apolipoprotein C-II (APOC2) mRNA
2183	12070	21972	2.12	2.0E-85	U10525.1	NT	Human DNA polymerase beta gene, exons 12 and 13
2793	11222		4.24	2.0E-85	7657468	NT	Homo sapiens similar to rat integral membrane glycoprotein POM121 (POM121L1), mRNA
4239	14138	23913	5.42	2.0E-85	4505860	NT	Homo sapiens plasminogen (PLG) mRNA

Table 4

## Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
4822	14705	24489	1.3	2.0E-85	AL163284.2	NT	Homo sapiens chromosome 21 segment HS21C084
7341	17209	27408	1.29	2.0E-85	A1708020.1	EST_HUMAN	w167h08.x1 NCL CGAP_Kid12 Homo sapiens cDNA clone IMAGE:2398431 3' similar to contains element MSR1 repetitive element;
2241	12125		2.44	1.0E-85	BE794306.1	EST_HUMAN	601591416F1 NIH_MGC_7 Homo sapiens cDNA clone IMAGE:3945818 5'
2344	12224	22121	8.09	1.0E-85	BE618392.1	EST_HUMAN	601462817F1 NIH_MGC_67 Homo sapiens cDNA clone IMAGE:3866021 5'
2344	12224	22122	8.09	1.0E-85	BE618392.1	EST_HUMAN	601462817F1 NIH_MGC_67 Homo sapiens cDNA clone IMAGE:3866021 5'
7632	17483	27704	2.06	1.0E-85	BE257917.1	EST_HUMAN	601109738F1 NIH_MGC_16 Homo sapiens cDNA clone IMAGE:3360553 5'
8296	18175	28419	2.56	1.0E-85	AA778785.1	EST_HUMAN	24503.s1 Scores_fetal_liver_spleen_1NLS_S1 Homo sapiens cDNA clone IMAGE:453245 3'
8296	18175	28420	2.56	1.0E-85	AA778785.1	EST_HUMAN	24503.s1 Scores_fetal_liver_spleen_1NLS_S1 Homo sapiens cDNA clone IMAGE:453245 3'
8365	18242	28492	2.28	1.0E-85	BF311552.1	EST_HUMAN	601897003F1 NIH_MGC_19 Homo sapiens cDNA clone IMAGE:4126440 5'
8365	18242	28493	2.28	1.0E-85	BF311552.1	EST_HUMAN	601897003F1 NIH_MGC_19 Homo sapiens cDNA clone IMAGE:4126440 5'
9194	19082	25283	2.7	1.0E-85	11417862	NT	Homo sapiens calcineurin binding protein 1 (KIAA0330), mRNA
9448	19082	25283	3.43	1.0E-85	11417862	NT	Homo sapiens calcineurin binding protein 1 (KIAA0330), mRNA
1410	11315		7.66	9.0E-86	BE274217.1	EST_HUMAN	601120778F1 NIH_MGC_20 Homo sapiens cDNA clone IMAGE:2967690 5'
220	10190	20001	1.3	7.0E-86	7662247	NT	Homo sapiens KIAA0680 gene product (KIAA0680), mRNA
921	10845	20691	1.33	7.0E-86	AA860801.1	EST_HUMAN	aj88f08.s1 Scores_parathyroid_tumor_NbHPA Homo sapiens cDNA clone IMAGE:1403559 3'
921	10845	20692	1.33	7.0E-86	AA860801.1	EST_HUMAN	aj88f08.s1 Scores_parathyroid_tumor_NbHPA Homo sapiens cDNA clone IMAGE:1403559 3'
6164	15121	24865	6.91	7.0E-86	11421737	NT	Homo sapiens Tax1 (human T-cell leukemia virus type I) binding protein 1 (TAX1BP1), mRNA
7078	16955	27148	2.91	7.0E-86	138557.1	NT	Homo sapiens galactose oxidase (GALC) gene, exon 15
7593	17444		1.63	7.0E-86	5453997	NT	Homo sapiens RAN binding protein 7 (RANBP7), mRNA
7624	17475	27696	2.35	7.0E-86	11526307	NT	Homo sapiens DiGeorge syndrome critical region gene 6 (DGCR6), mRNA
8329	18206	28455	2.15	7.0E-86	11417012	NT	Homo sapiens similar to transcription factor CA150 (H. sapiens) (LOC63170), mRNA
8329	18206	28456	2.15	7.0E-86	11417012	NT	Homo sapiens similar to transcription factor CA150 (H. sapiens) (LOC63170), mRNA
1272	11179	21027	9.33	6.0E-86	4505492	NT	Homo sapiens oxoglutarate dehydrogenase (lipoamide) (OGDH), mRNA
204	10175	19993	1.48	4.0E-86	BE547173.1	EST_HUMAN	601072594F1 NIH_MGC_12 Homo sapiens cDNA clone IMAGE:3458830 5'
5677	15586	25686	10.18	4.0E-86	BE295843.1	EST_HUMAN	601176865F1 NIH_MGC_17 Homo sapiens cDNA clone IMAGE:3531953 5'
8567	10175	19993	1.9	4.0E-86	BE547173.1	EST_HUMAN	601072594F1 NIH_MGC_12 Homo sapiens cDNA clone IMAGE:3458830 5'
5435	15355	25411	6.02	3.0E-86	AW340946.1	EST_HUMAN	xz2h12.x1 NCL CGAP_Lu24 Homo sapiens cDNA clone IMAGE:2871719 3'
7868	17718	27963	3.31	3.0E-86	BE886479.1	EST_HUMAN	601509696F1 NIH_MGC_71 Homo sapiens cDNA clone IMAGE:3911303 5'
7868	17718	27964	3.31	3.0E-86	BE886479.1	EST_HUMAN	601509696F1 NIH_MGC_71 Homo sapiens cDNA clone IMAGE:3911303 5'
8734	17883	28125	9.01	3.0E-86	AI659240.1	EST_HUMAN	tut18b02.x1 NCL CGAP_Pr28 Homo sapiens cDNA clone IMAGE:2251371 3'
9163	19560		2.02	3.0E-86	BE410354.1	EST_HUMAN	601302333F1 NIH_MGC_21 Homo sapiens cDNA clone IMAGE:3636753 5'
266	10231	20046	1.33	2.0E-86	AA308264.1	EST_HUMAN	EST177282 Jurkat T-cells VI Homo sapiens cDNA 5' end
408	10354		1.67	2.0E-86	AL163203.2	NT	Homo sapiens chromosome 21 segment HS21C003

Table 4

## Single Exon Probes Expressed in Heart

Probe SEQ ID NO:	Exon SEQ ID NO:	ORF SEQ ID NO:	Expression Signal	Most Similar (Top) Hit BLAST E Value	Top Hit Accession No.	Top Hit Database Source	Top Hit Descriptor
1173	11085	20929	2.18	2.0E-86	N68977.1	EST_HUMAN	yz19a08.r1 Soares multiple sclerosis 2NbhMSP Homo sapiens cDNA clone IMAGE:283478 5'
2144	12032	21930	2.37	2.0E-86	9635487	NT	Human endogenous retrovirus, complete genome
2222	12107	22011	1.12	2.0E-86	AB033103.1	NT	Homo sapiens mRNA for KIAA1277 protein, partial cds
3399	13288	23087	1.43	2.0E-86	AW966142.1	EST_HUMAN	EST T378215 MAGE resequences, MAGI Homo sapiens cDNA
3686	13599	23385	2.16	2.0E-86	AF156776.1	NT	Homo sapiens lysophosphatidic acid acyltransferase-delta (LPAAAT-delta) mRNA, complete cds
3686	13599	23386	2.16	2.0E-86	AF156776.1	NT	Homo sapiens lysophosphatidic acid acyltransferase-delta (LPAAAT-delta) mRNA, complete cds
3954	13862		2.42	2.0E-86	AW515742.1	EST_HUMAN	hd87g08.x1 NCL CGAP_GC6 Homo sapiens cDNA clone IMAGE:2916542 3'
4679	14565	24360	2.8	2.0E-86	AF056490.1	NT	Homo sapiens cAMP-specific phosphodiesterase 8A (PDE8A) mRNA, partial cds
5580	15495	25571	1.53	2.0E-86	Z16411.1	NT	H.sapiens mRNA encoding phospholipase c
5580	15495	25572	1.53	2.0E-86	Z16411.1	NT	H.sapiens mRNA encoding phospholipase c
6987	16864	27057	2.22	2.0E-86	11437135	NT	Homo sapiens butyrobetaine (gamma), 2-oxoglutarate dioxygenase (gamma-butyrobetaine hydroxylase) (BBOX), mRNA
6987	16864	27058	2.22	2.0E-86	11437135	NT	Homo sapiens butyrobetaine (gamma), 2-oxoglutarate dioxygenase (gamma-butyrobetaine hydroxylase) (BBOX), mRNA
7372	17241	27446	1.95	2.0E-86	11422084	NT	Homo sapiens chromosome segregation 1 (yeast homolog)-like (CSE1L), mRNA
7969	17819	28061	2.69	2.0E-86	11545846	NT	Homo sapiens basic-helix-loop-helix-PAS protein (NPAS3), mRNA
7969	17819	28062	2.69	2.0E-86	11545846	NT	Homo sapiens basic-helix-loop-helix-PAS protein (NPAS3), mRNA
8276	18156	28397	1.83	2.0E-86	4759051	NT	Homo sapiens ribosomal protein S6 kinase, 90kD, polypeptide 5 (RPS6KA5) mRNA
9606	19187	25250	2.4	2.0E-86	11418189	NT	Homo sapiens thyroid autoantigen 70kD (Ku antigen) (G22P1), mRNA
9772	19290		1.81	2.0E-86	AB011399.1	NT	Homo sapiens gene for AF-6, complete cds
9955	19520	25139	1.47	2.0E-86	11417883	NT	Homo sapiens adrenergic, beta, receptor kinase 2 (ADRBK2), mRNA
1579	11483	21343	3.1	1.0E-86	4826855	NT	Homo sapiens NADH dehydrogenase (ubiquinone) Fe-S protein 1 (75kD) (NADH-coenzyme Q reductase) (NDUFS1) mRNA
3125	13050	22847	2.06	1.0E-86	5453649	NT	Homo sapiens fibulin 5 (FBLN5) mRNA
3197	13122	22927	2.42	1.0E-86	L20492.1	NT	Homo sapiens gamma-glutamyl transpeptidase mRNA, complete cds
3256	13179	22977	1.32	1.0E-86	AL163209.2	NT	Homo sapiens chromosome 21 segment HS21C009
3256	13179	22978	1.32	1.0E-86	AL163209.2	NT	Homo sapiens chromosome 21 segment HS21C009
3864	13775	23568	11.48	1.0E-86	7706161	NT	Homo sapiens hypothetical protein (LOC51318), mRNA
3864	13775	23569	11.48	1.0E-86	7706161	NT	Homo sapiens hypothetical protein (LOC51318), mRNA
4167	14067	23942	5.76	1.0E-86	AL163300.2	NT	Homo sapiens chromosome 21 segment HS21C100
4832	14714	24497	1.11	1.0E-86	AF100751.1	NT	Homo sapiens FK506-binding protein FKBP23 isoform mRNA, complete cds
8882	15328	25378	2.15	1.0E-86	AL163284.2	NT	Homo sapiens chromosome 21 segment HS21C084
5287	15209		1.47	9.0E-87	AI150703.1	EST_HUMAN	qb77c09.x1 Soares fetal heart_Nb-H19W Homo sapiens cDNA clone IMAGE:1706128 3' similar to SW:K1CJ_MOUSE P02535 KERATIN, TYPE I CYTOSKELETAL 10 ;